Issue 57
PS
1957 Series
THE PREVENTIVE MAINTENANCE MONTHLY
CAMP HIAWATHA FOR BOYS
WILL EISNER
"...and YOU gotta run outta water in Indian Territory"

When it comes to maintenance and supply...

A SHARP JOE KNOWS

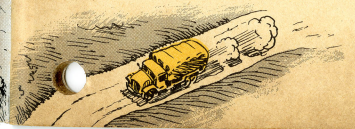
When it comes to maintenance and supply...

A SHARP JOE KNOWS HIS UNIT'S TOE

(Table of Organization and Equipment)

Right as rain.
And twice as true.
Your unit's TOE is your outfit's birth certificate
. . . plus its bank account.
A few quiet moments spent studying your
TOE'll make you a wiser man.
The better you know your TOE the better
you'll understand your unit's mission
. . . and its equipment.
Also how you and everyone else
. . . from the commander on down
. . . fit into the unit's structure.
Any maintenance or supply man
worth his rations and ammo
knows his TOE backwards,
forwards and upside-down.
The TOE tells, for example,
your outfit's job (responsibility),
the kind and amount of equipment authorized,
what technical service furnishes which items,
and the kind and number
of men who'll belong to the outfit.
You can do a better job
if you know what you've got,
what you're supposed to do with it
and who'll be helping you do it.
Chew over your unit's TOE today.*
It'll help you do a better job.

**All TOE's get listed in DA Pamphelt 310-7 in case you want to find out which is yours.*



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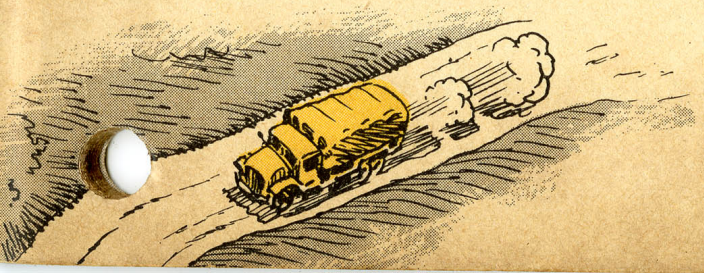

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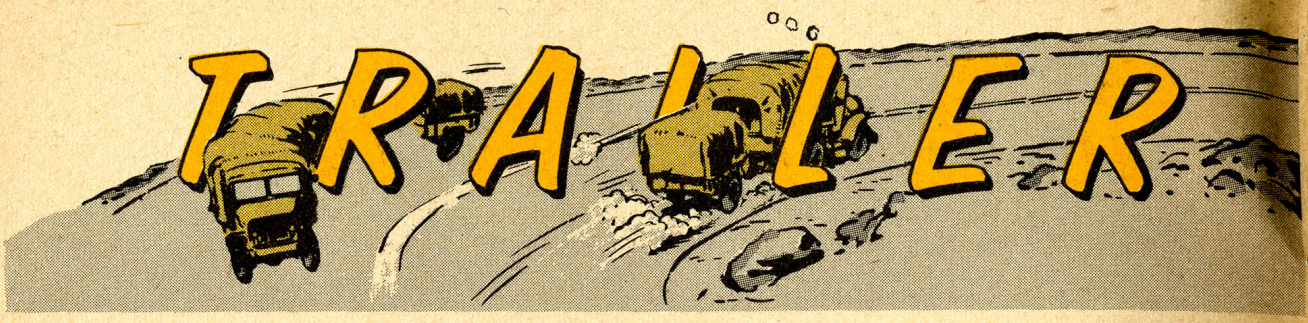
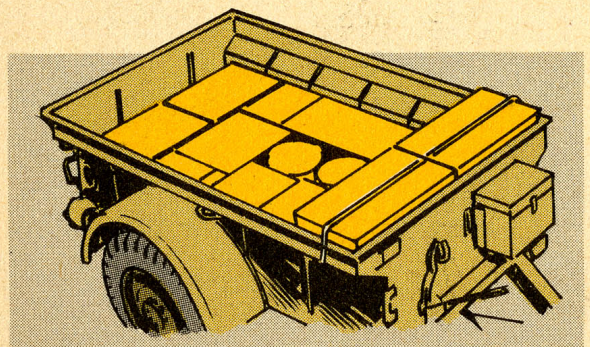


Lots of good competent drivers shy off towing trailers. The way they dodge and squirm, you'd think it was KP or extra duty. And then when someone pins 'em down to it, they start off scared, and mebbyso tear up the trailer, or louse up the load.

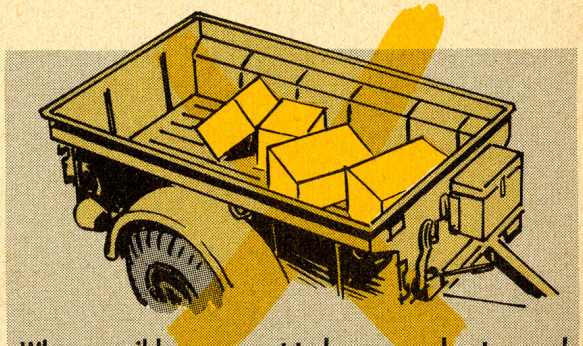
Honest, pulling a trailed load is no sweat. Just a little care and common sense when you're loading and hooking up, and you'll have no trouble at all.

LOADING

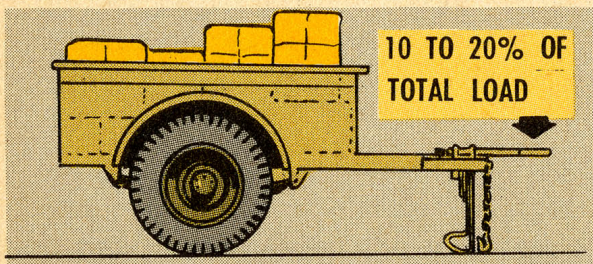
Basic principles of good truck loading apply to your trailers, too.



You want the load well distributed in the bed, with the heaviest items on the bottom, of course.



When possible, you want to be sure and put enough cargo into the trailer to fill it, and so prevent your load shifting.



The only difference when loading a trailer, you must pay more attention to the fore-and-aft balance. Your trailer should always balance so that it has some weight down on the hitch. This should be approximately ten to twenty percent of your total load. (50 to 100 pounds on the ¼-ton trailer).

Never attempt to pull a trailer that is balanced so it pulls up on the hitch.

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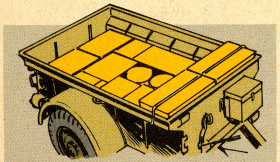

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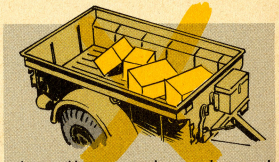

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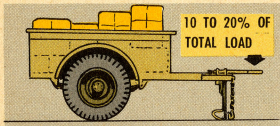

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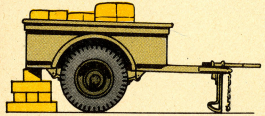
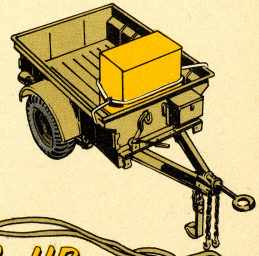
Careful Since the austerity program took effect, some of your trailers will not have the rear support, or safety jack. So, to prevent a possible upset while you are loading, best you support it. Of course, a trailer can't tip backwards while its hooked up to the truck.



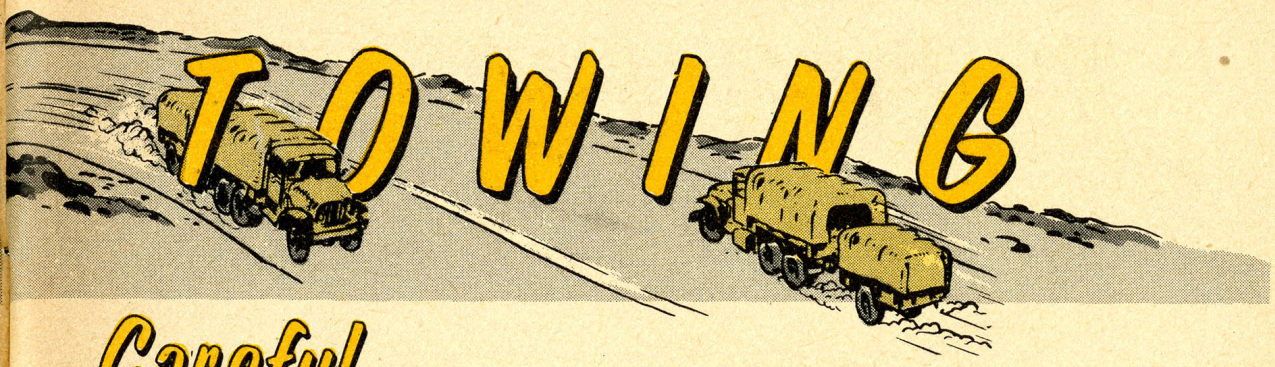


Loads that do not fill the trailer bed should be lashed in place, and of course the same rules apply to the tarp and bows on trailers as on trucks. A flapping tarp will wear itself out in a short time.

HOOKING UP

The first step in towing a trailer is hooking it to your prime mover. This must be done carefully and done right. Improper hitching can cause damage to the trailer, to the hoses or cables, or cause loss of brakes while running. At the very worst, it can cause the trailer to break away on the road, possibly slamming into some poor guy coming the other way.

You spot your vehicle so that your pintle hook is as close as possible to the lunette of the loaded trailer. A guide is practically essential to get you spotted right. (Remember when loading trailers to so locate them that the towing vehicle can get in to hook up and can pull out conveniently. You don't want to have to rassle a loaded trailer around by hand.)



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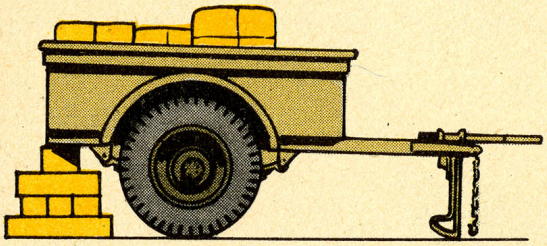

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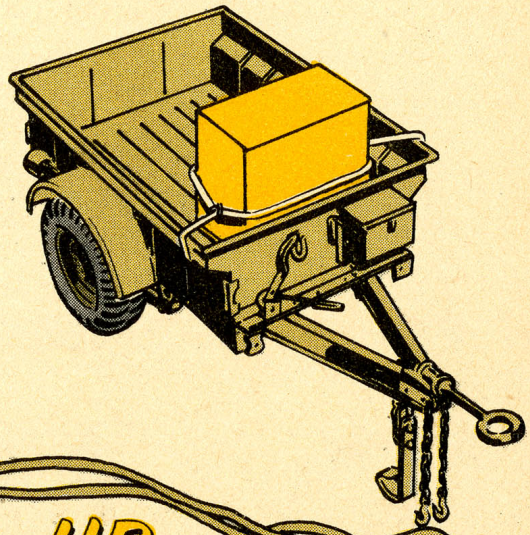

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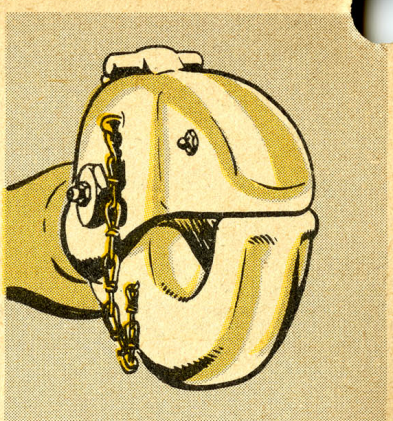
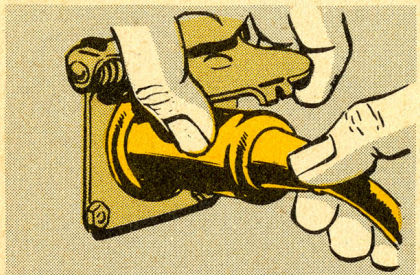
Then get a crew to help you lift the lunette into the pintle hook.

Be sure the pintle hook is lubricated and working freely.

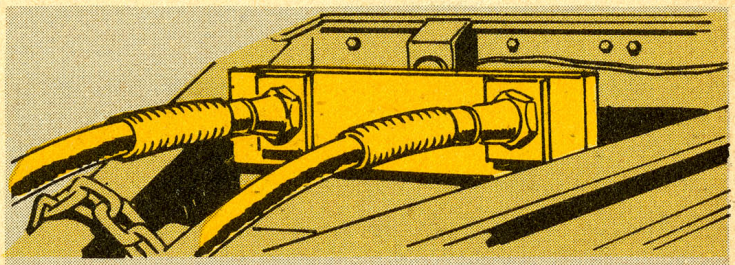


Install the safety pin to lock the pintle hook.

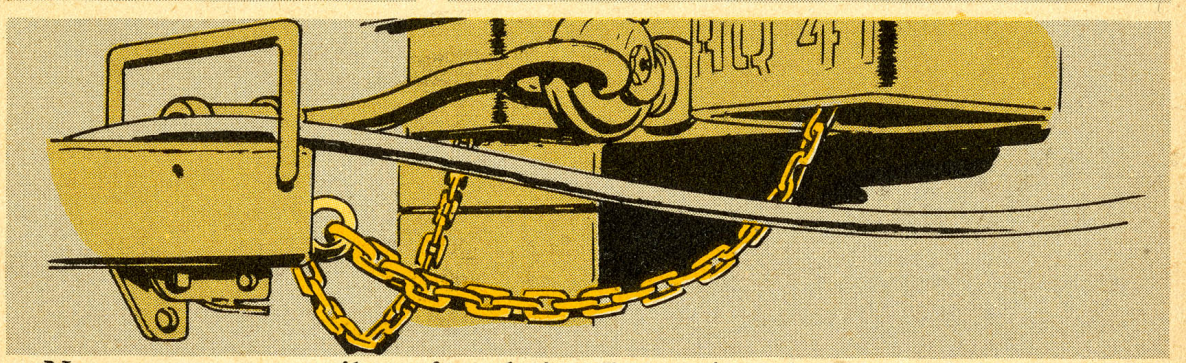
CAUTION: If the safety pin is missing, get a new one, or make one up from a large cotter pin or a length of welding rod bent like a safety pin. Don't operate a trailer with an unlocked pintle hook.



Next you connect your electrical cable, and the air brake hoses on the larger trailers.

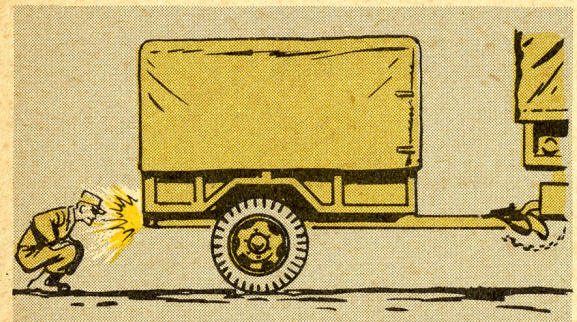


Watch to keep your hoses from getting pinched between the trailer hitch and the vehicle bumperettes when turning. (MWO Eng 9057-1 gives a pretty good fix to prevent pinched hoses.)

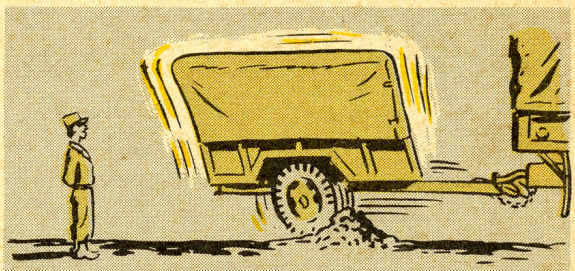


Now secure your trailer safety chains. Remember, the purpose of safety chains is to keep your trailer following your vehicle until you get stopped if the hitch should carry away. This will probably never happen to you, but you'd never forgive yourself if careless hooking up caused your trailer to go wild and ram a school bus, f'rinstance. NOTE: TB 9-871A-1 (2 July 54) removed the safety chains from the ¼-ton trailers, but authorized you to keep 'em for operation in states where the law requires safety chains on trailers. Be sure you're legal where you're running.

So Now You're Hooked Up



Check your lights before you move off.

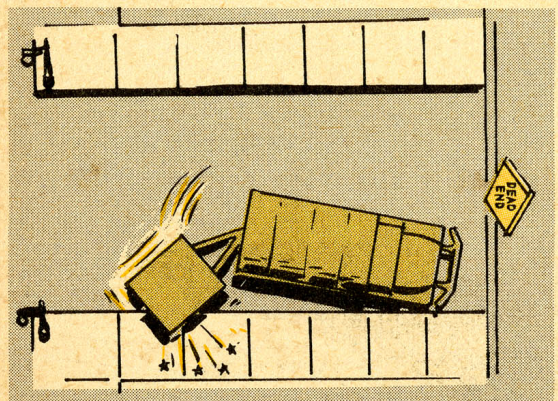


Make an actual check of your brakes immediately when you start up, before you take your place in the convoy or leave the loading area.

(The easiest way to be sure your trailer brakes are working is to have someone watch your trailer wheels while you roll ahead slow and hit the brakes hard on sand or loose gravel. You'll slide the wheels, or at least they'll drag a little dirt when you stop. If you happen to have a combination equipped with a separate manual trailer brake control, be sure to check that, too.)

DRIVING

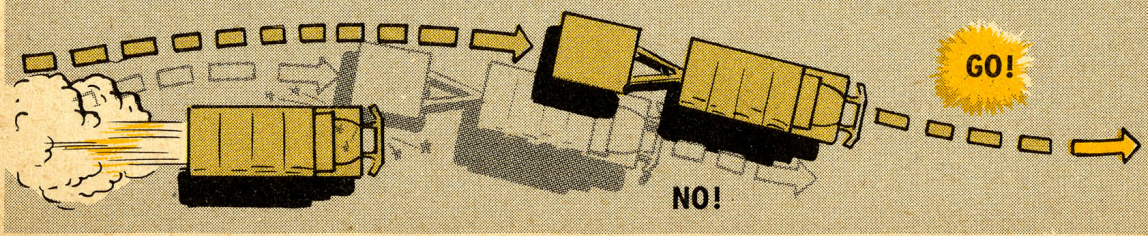
Driving with a trailer is neither difficult nor dangerous. A little thinking ahead will make it real simple.



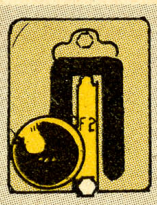
Except when actually spotting the trailer for loading or unloading, try to avoid situations where you'll have to back up.

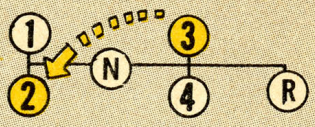
Remember that your truck is pulling an additional load, so you'll need a little more time to get rolling, and a little more space to stop in.

Also, you'll need quite a bit more space when passing another vehicle.

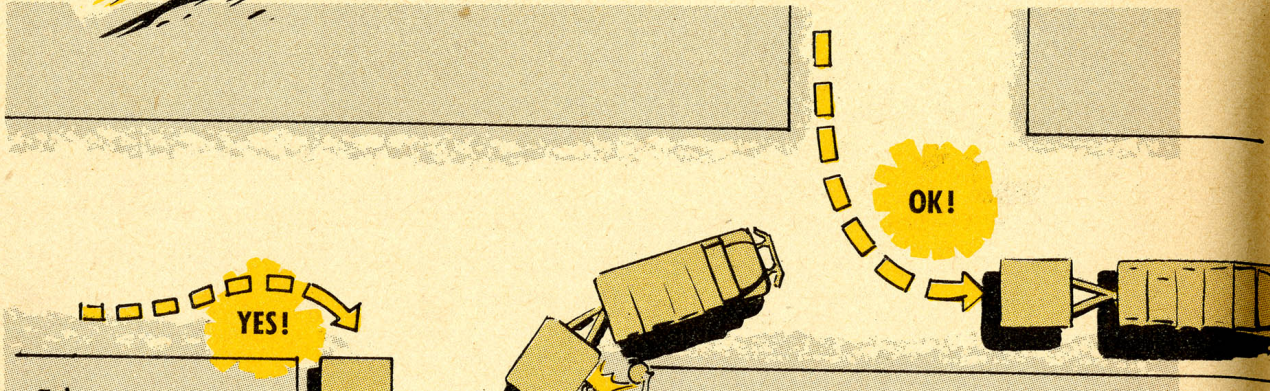


If you have a truck with a Hydra-Matic transmission, you'll want to use F-2 for hills that might not need it if you weren't pulling.





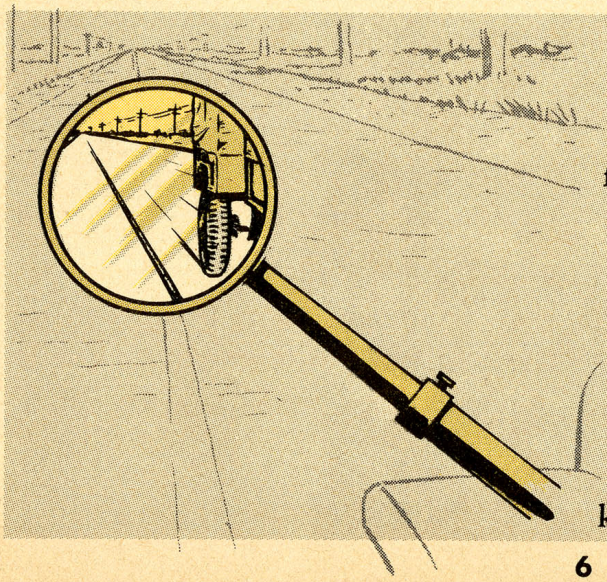
In the trucks with a manual transmission you may have to go down one more gear to get over the top.



Take not over two feet of extra space on the right curb for right turns.

In making turns, you'll need a little wider swing, but you don't need to go way out and clutter up the whole roadway.

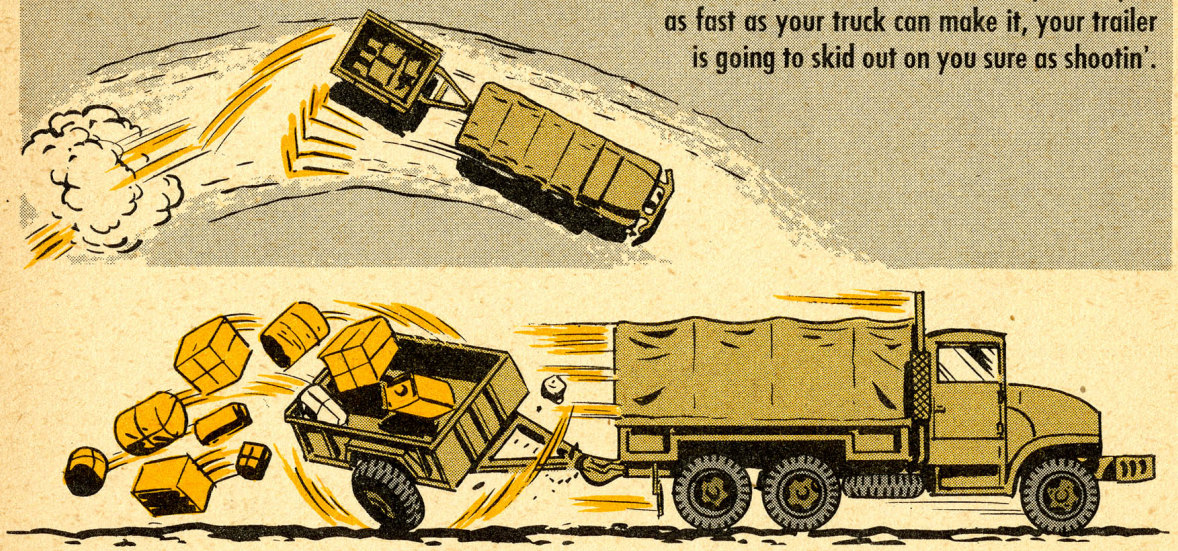
Make left turns as usual.



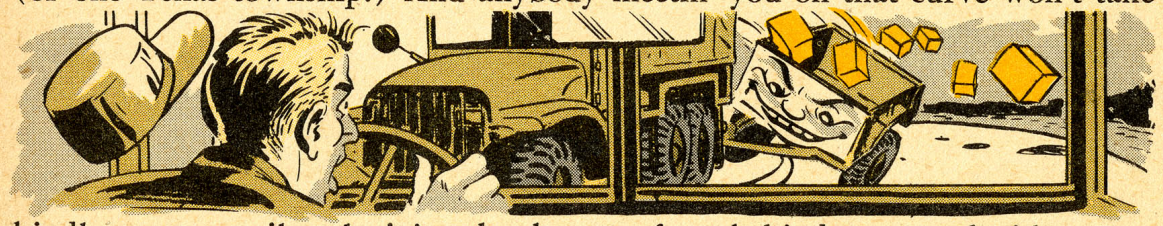
Your rear view mirrors are most important when pulling a trailed load. You should have 'em swung out as far as possible, and set so you can see the back corners of your trailer. This lets you keep an eye on it for sway, watch your tires, and in general be sure it is trailing along OK. Just about the only way you'll ever get in trouble driving a trailer will be cowboying it. If you can keep off this kick, you shouldn't ever have to worry.

Remember that your trailer is on a swivel joint behind your truck. As long as you are running straight on a smooth road, it will tail right along.

But if you hammer into a sharp curve just as fast as your truck can make it, your trailer is going to skid out on you sure as shootin'.

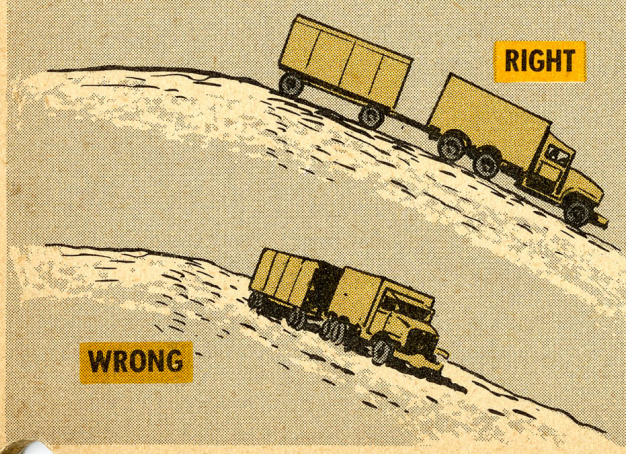


Also, bein's that joint swivels vertical as well as horizontal, happen you bounce a wheel against a rock or a curbstone, she can flip her load over two counties (or one Texas township.) And anybody meetin' you on that curve won't take



kindly to your trailer playin' peek-a-boo out from behind your truck either. But, if you'll slack off just a little on the curves, no sweat.

Drivers Pulling M33 Radar Vans, Note:



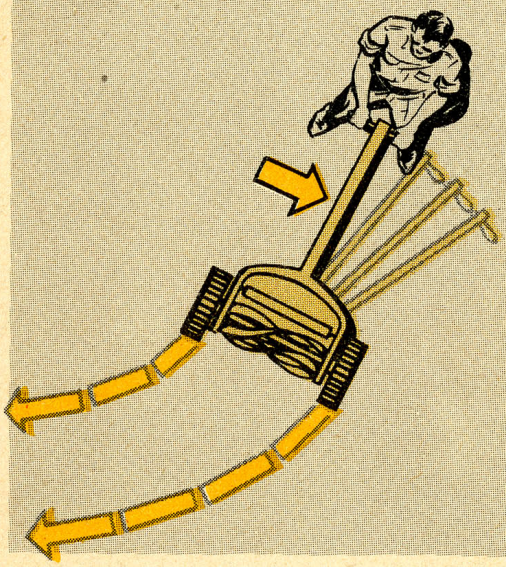
The load in the system van is off center to the left, so be particularly careful when turning this van to the right. When proceeding cross country to emplacement, try to negotiate all hillsides straight up or down, not slanting across, and on rough ground stop dead before turning right.

BACKING

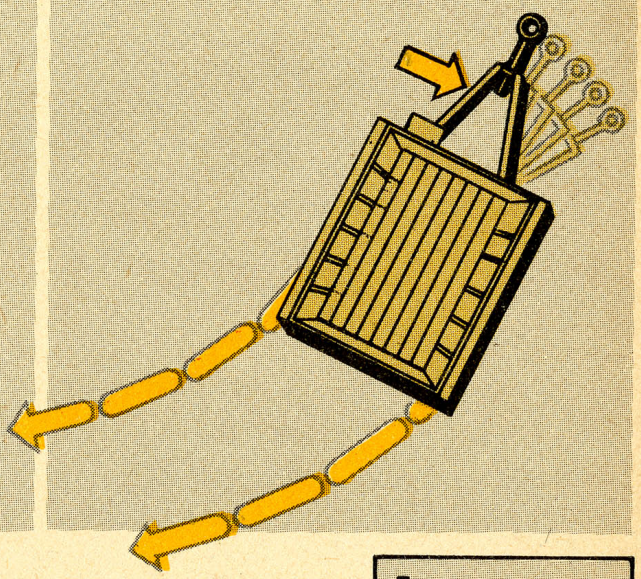
Backing the trailer is what scares most people away from driving 'em. It is different, no denying that. But it is not hard, and after a little practice you'll do it by instinct.

Think a minute. If you had a light trailer to back up and spot by hand, you'd have no trouble.

You'd swing the hitch around just like the handle on a lawn mower and shove it right where you wanted it, wouldn't you?



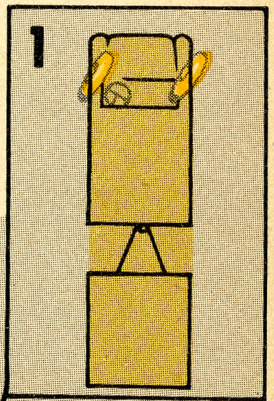
OK, so think of this, and use your truck pintle hook instead of your hand. This'll give you the general idea of what you intend to do to back the trailer.

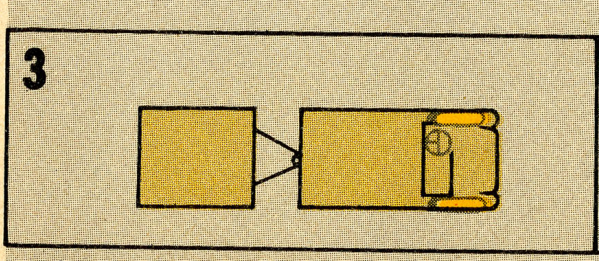


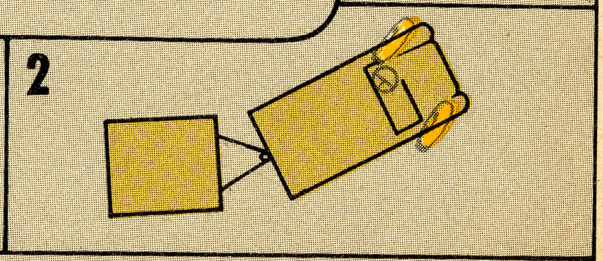
Of course, it isn't **quite** that simple, accounta the turning radius of the truck is greater than that of the trailer, so if you cut her too short, you can't straighten up again, but that's the general idea.

To turn the trailer to the left, you must shove the lunette to the right so you cut your truck steering to the right.

Then when your trailer rear end has started to swing left, you cut your truck steering left so that it follows around.

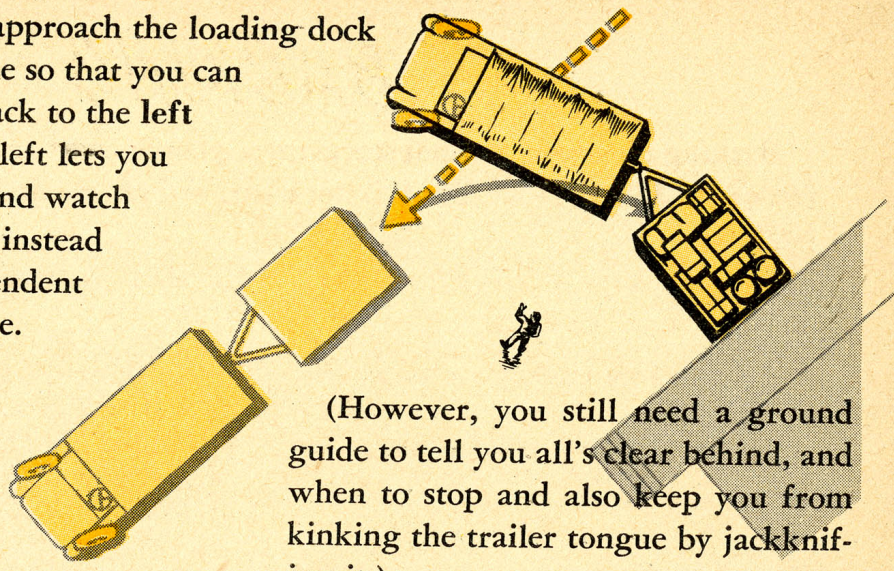






Natch, the swing to the right is started just the opposite, by starting your truck's rear end to the left.

Whenever possible, approach the loading dock or trailer parking line so that you can swing your trailer back to the **left** to park it. Swinging left lets you stick your head out and watch your trailer yourself instead of being wholly dependent on your ground guide.



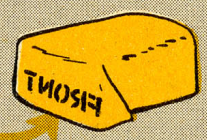
(However, you still need a ground guide to tell you all's clear behind, and when to stop and also keep you from kinking the trailer tongue by jackknifing it.)

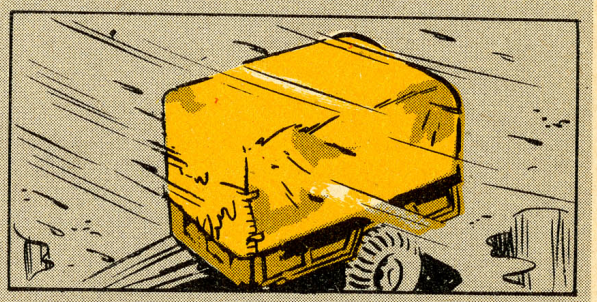
Four wheelers, such as the M33 vans, are backed up by few men and no boys at all. It can be done, by experts, but it's very tricky. Your best bet is to spot the van as close as you can driving forward, and then get the section to manhandle it into place.

Paint The Paulin!

Some people can't tell the front from the rear on the paulin for the M104 and M105-series 1½-ton, 2-wheel trailers and they're mixing 'em up in a way that gets their cargo mighty wet on a rainy day.

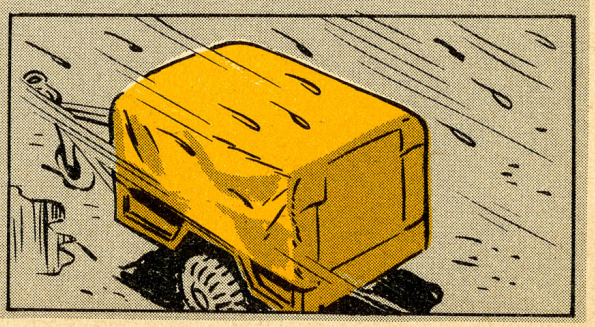
Once we got ours on straight, we stenciled the word FRONT on the inside of the forward flap of the canvas.





We made sure that this front flap overlapped around the edges of the side of the canvas — so water can't drip inside through the edges.

The other flap, or the back, we keep tucked underneath the sides and tied . . . and marked REAR.

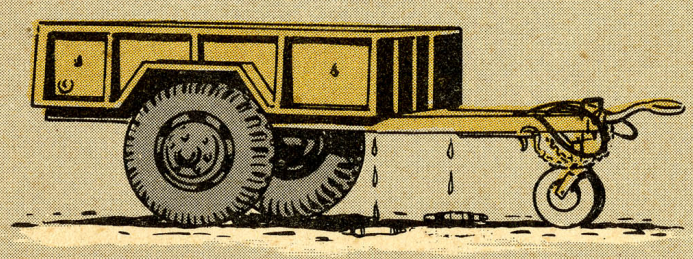


GENERAL TIPS

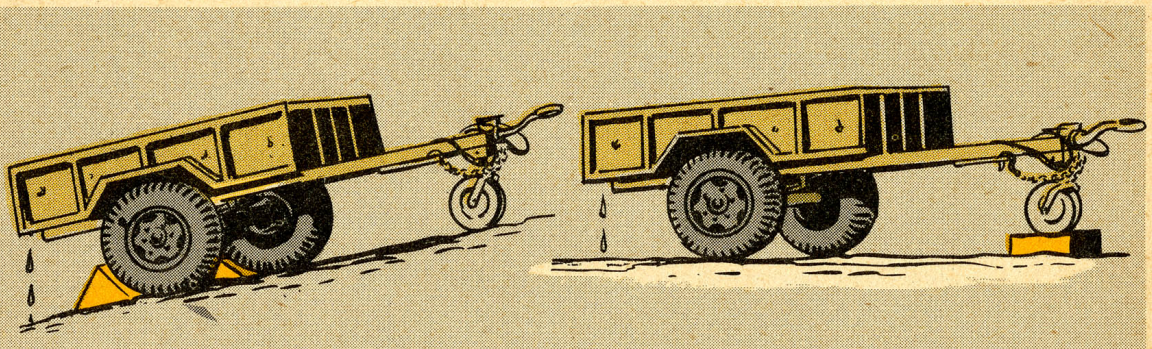
Here're a few gimmicks to keep in mind when using trailers. First, whenever possible, match your trailer to the towing vehicle as to tire size. That is, pull only M104 trailers behind M135 and M34 trucks, and pull only M105 trailers behind M211 and M35 trucks. This way you can use the truck spare tire for the trailer if needed. The pressure won't be right, but it will do to finish the trip. (And, if you should lose two or three truck tires from bad luck or enemy action, you can still bring the truck home on the trailer tires losing only the trailer and such of its load as you can't get onto the truck.)

Parking

Your M104 and M105 trailers have a habit of collecting rainwater in the front of the beds when parked, due to the forward tilt of the bed when the trailer is resting on the front wheel.



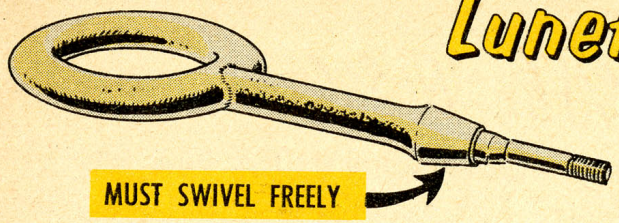
Some people have been getting around this by drilling drain holes in the front corners of the bed.

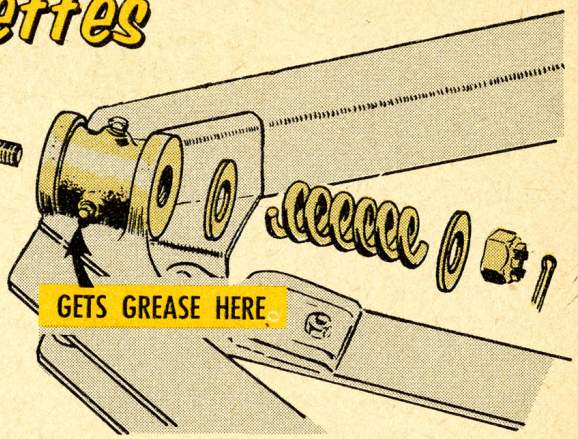


Others are just careful to park their trailers on a slight grade with the tailgates down-hill. (If you do this, be sure to chock your wheels.) This will let 'em drain, no sweat. (You could block up the front wheel a few inches if no grade's handy.)

Of course you know that you park the older M100 trailers by turning 'em upside down and blocking the tongue in the air. The new ones have drain valves —block 'em so they can drain.

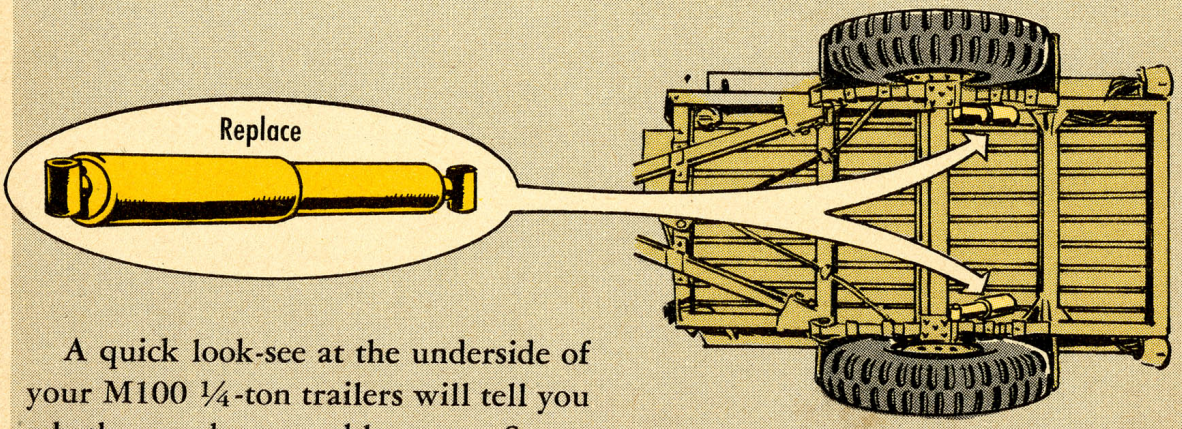
Lunettes





Some of the M100 lunettes got out of the factory with the retaining nuts screwed down too tight. The springs were completely compressed—the coils touching each other—and there was no give. These lunettes will not rotate properly in their housings, and since the pintle hook on the ¼-ton trucks is not a revolving type, you got troubles. Check your M100's, and if you have these tight springs, loosen 'em up until there is some space between the coils of your compression springs. In fact, you'd better pull the lunette clear apart and clean any rust off the taper, grease it and reassemble. It may be that you'll have to drill a new cotter key hole to get the correct adjustment, but you want to be sure your lunette is free to turn.

Got A Broken Frame?



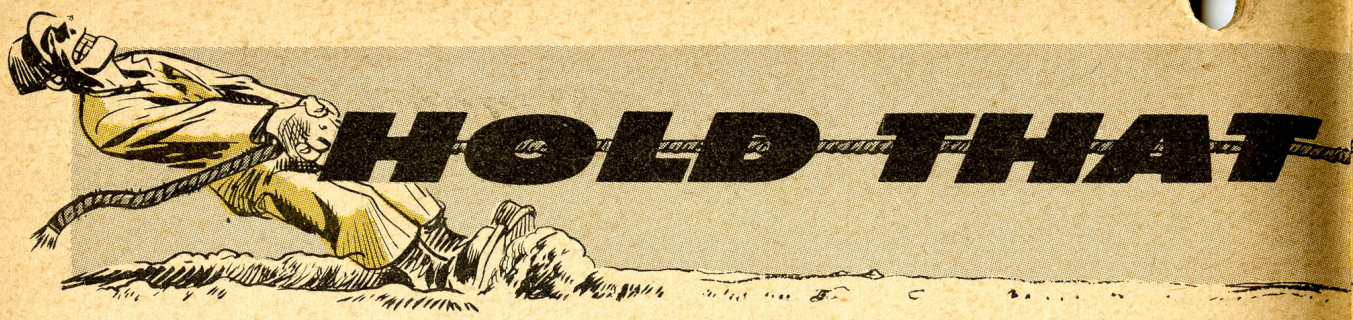
A quick look-see at the underside of your M100 ¼-ton trailers will tell you whether you have troubles or not. Seems there are some trailers that have cracked frames—with most of the damage being done just above the shock absorbers.

Replace old shocks (Ord Stock No. G503-708-8715) with the newer kind (Ord Stock No.G740-7697442), like it says in MWO Ord G747-WI (23 May 56).

Somewhere along the line, the shock absorbers for these trailers were changed in production—to make 'em stronger was the idea. But, a few trailers with weaker shocks escaped into the field before the change was made.

So, look over the frames of your trailers.

That's about all she wrote. Keep these few points in mind and your trailers will work for you real nice and polite like.



That vehicle you drive may purr like a kitten, but it's a tiger, brother.

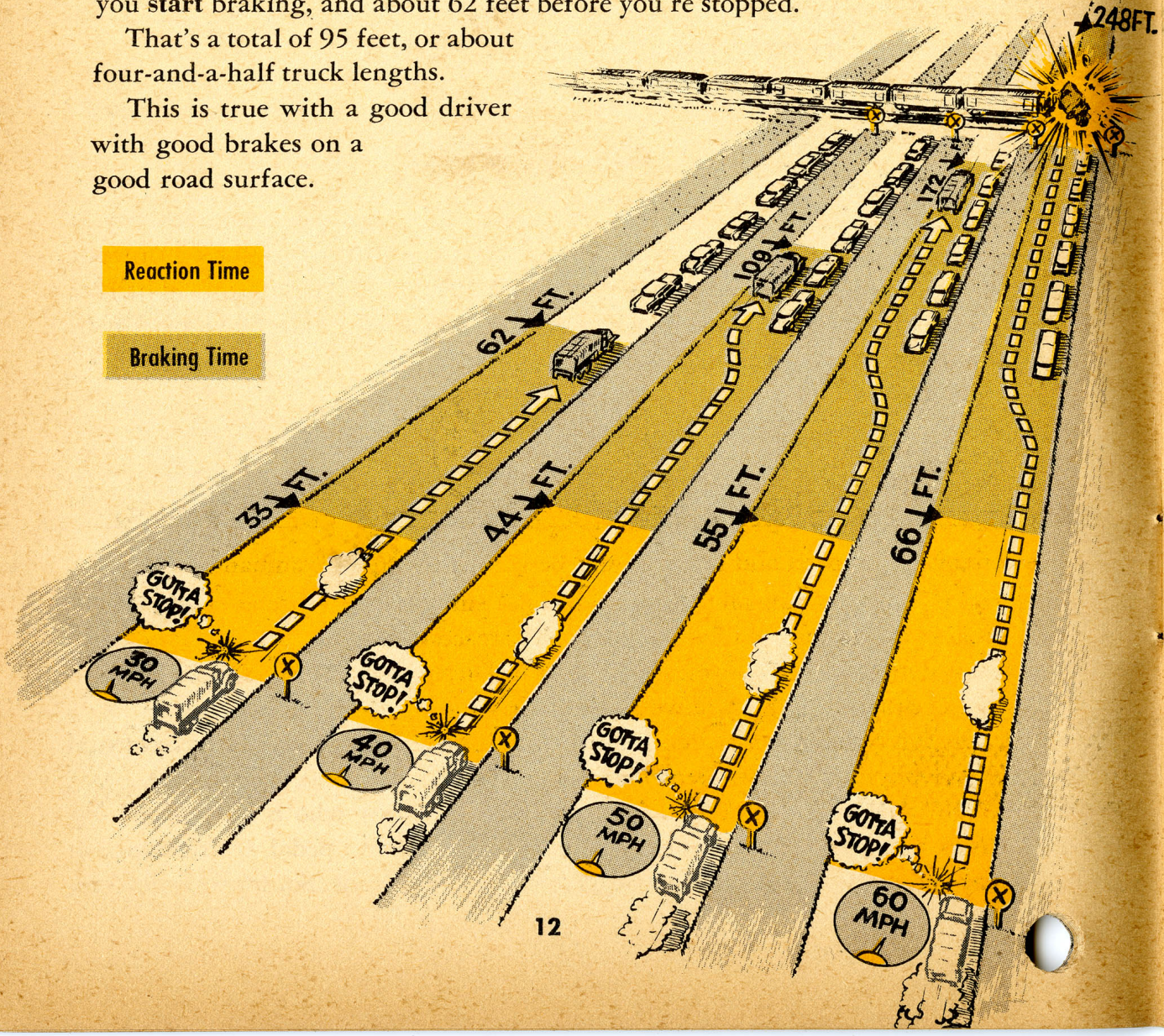
You may be known as "Old Lightning Foot," or "Brake-Check Charlie," but the best way to keep from becoming messy cargo on the truck in front of you is a sweet combination: Good brakes, fast reaction time and horse sense.

You've probably seen it somewhere before, but to keep your heap and yourself off permanent deadline, it's good to remember ... it takes a driver with normal reaction time four to six-tenths of a second to get his brogan from the accelerator to the brake.

At 30-MPH you've gone 33 feet, or almost twice the length of your truck before you **start** braking, and about 62 feet before you're stopped.

That's a total of 95 feet, or about four-and-a-half truck lengths.

This is true with a good driver with good brakes on a good road surface.



HOLD THAT TIGER

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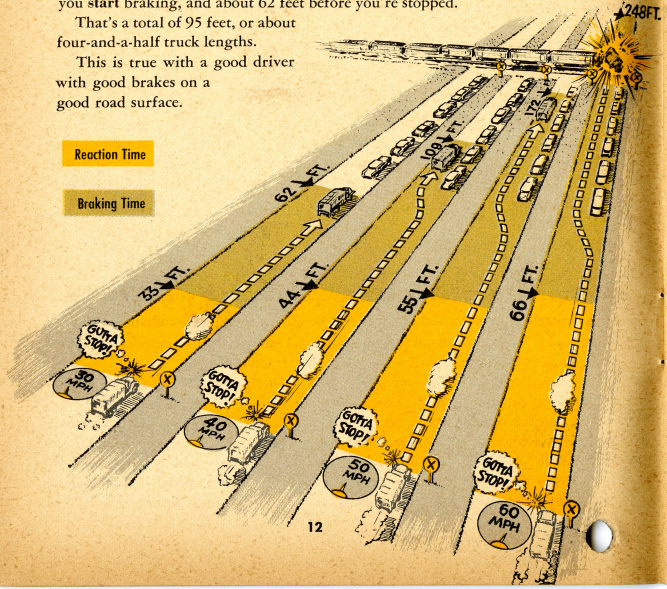
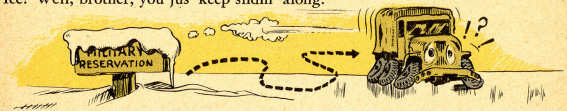


Wet weather and winter driving double the odds on stopping distance.

With good brakes on a wet road you go about twice as far on a sudden or emergency stop, and up to 10 times as far on snow and ice.

Wet weather, average road surface, good brakes, 30-MPH . . . 8 times the length of your truck with nothing to spare.

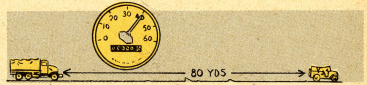
Ice? Well, brother, you jus' keep slidin' along.



"OK," you say, "how do I keep from getting bounced off the truck in front of me?"

HERE'S AN EASY RULE TO REMEMBER:

When following another vehicle on good roads, and you have good brakes, stay in back of him at least twice the distance in yards as the road speed shown on your speedometer. In other words, if you're going 20-MPH, you'll stay 40 yards in back of the vehicle in front of you. If you're going 40-MPH, you'll lay back 80 yards. This'll give you a good, safe margin.



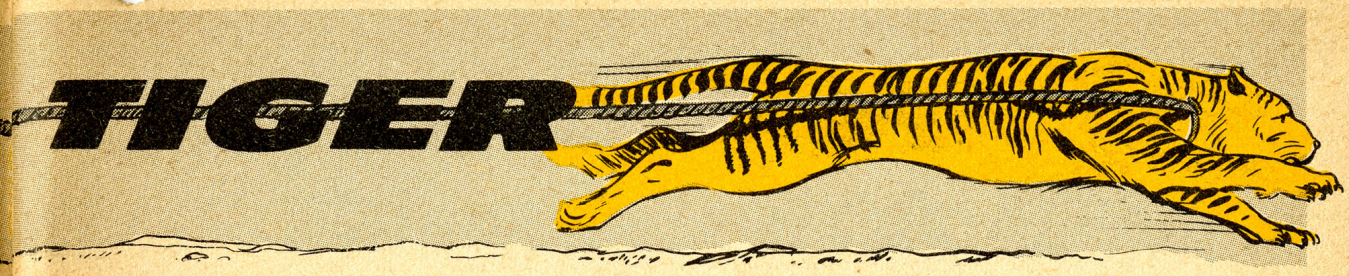
In convoy, your speed and interval will be set by the convoy commander.

All right, you're a bug on brakes and make sure they're in good shape all the time. Brakes you can test and fix, but how about reaction time?

That was determined when you were tested and licensed as a driver. If your reaction time was more than average, you wouldn't be driving.

Still, reaction time gets rusty, too. Things that'll slow it down are: fatigue, mental attitude and physical illness. Remember that when you're tired, mad or sick.

Although it's good to be able to stop on a dime, the guy who is **always** burning rubber is as bad a driver as the one who can't find the brake pedal. Quick stops can cause rear-end collisions, injured passengers and shifted loads. So, try to avoid 'em.



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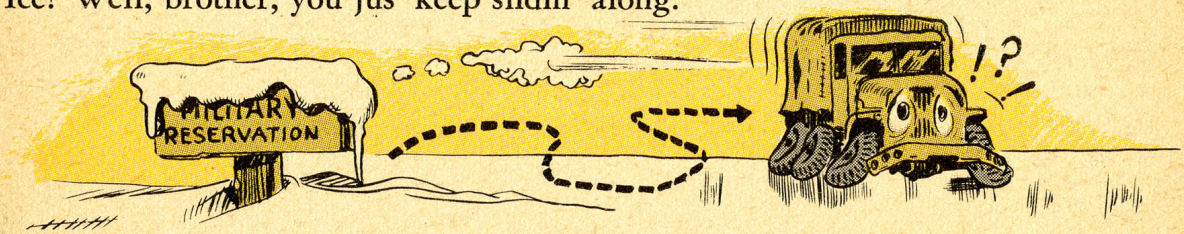

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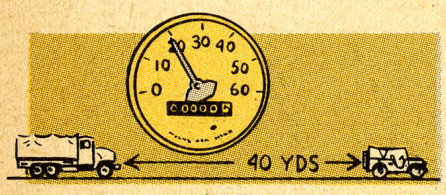

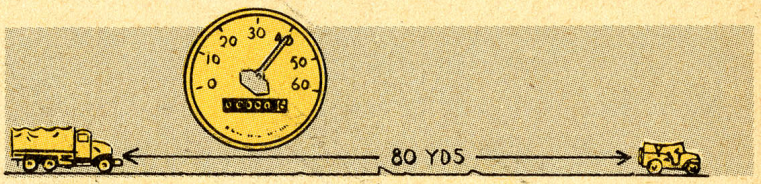

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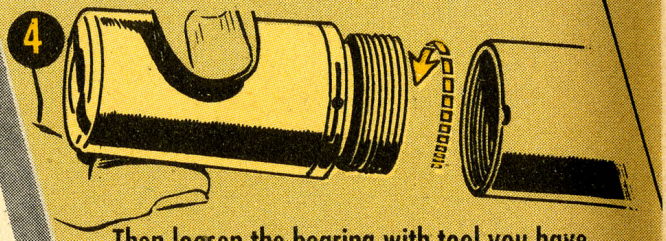
YOU'VE GOT A STAKE

(In cleaning your .30-cal light machine gun front-barrel-bearing)

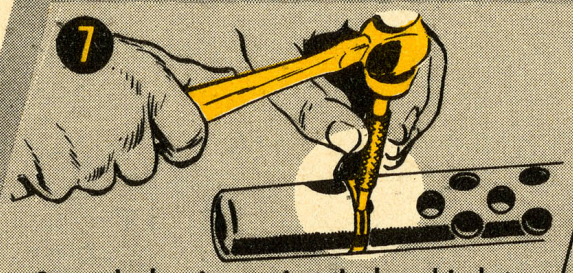
Just because FM 23-55 tells you to clean the front-barrel-bearing on your .30-cal light machine gun, but doesn't tell you how to remove the bearing, that's no reason for not cleaning it. No, sir . . . not when you can get all the dope right here —

First off . . . you're not supposed to clean the bearing on your own hook. To clean and replace the bearing you've gotta unstake and stake it—with your squad leader or company armorer keeping an eye on the job you're doing.

1 Get the tools you need—a hammer and center punch—from the armorer, and you're all set.



4 Then loosen the bearing with tool you have on hand that'll do the trick. Remove it the rest of the way by hand. There's usually no need for removing the band. If you want it off, drive it off with something like a cold chisel.



7 Screw the bearing against the barrel jacket . . . stick the point of the center punch in the dents on the band . . . and give a few raps with the hammer. You're in business again.

8 When you replace a broken band, slip the new one on the bearing. Screw in the bearing until you have a snug fit against the barrel jacket . . . adjust the band so that the center of the slit in the band will line up with the notch in the jacket . . . tighten the bearing. Then stake the two spots on the band. You're done.

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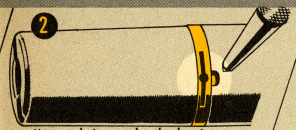
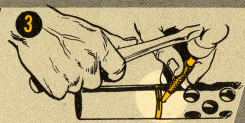


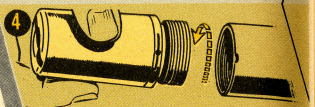
Now . . . let's unstake the bearing. See where the bearing band is staked into the barrel jacket?

3



OK . . . stick the point of the punch in the spot between the band and slot in the barrel jacket and give a few taps with the hammer.

4



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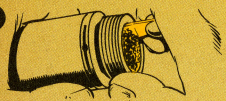
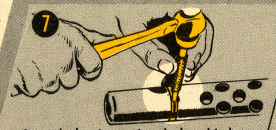


The important thing is to scrape away the carbon. A pen knife'll do the trick. Be careful you don't scratch the part of the bearing that bears against the barrel. Brush the threads and replace the bearing.

6

It's not likely to happen, but if the band slips off when you're cleaning the bearing, put it back on so's the half moon cut in the bearing lines up with the staked section of the band. The stake on the other side of the band will line up automatically.

7



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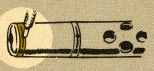
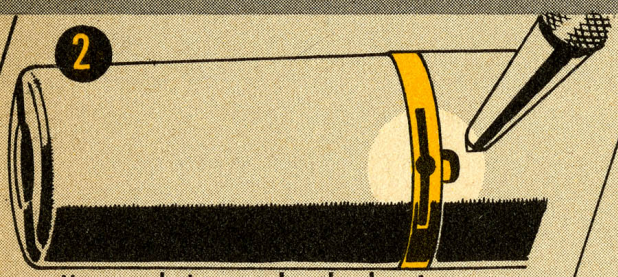


In case your machine gun is like the one in the picture, you also wanna remove the second band so you can clean the plug. You stake and unstake the second band same as the other one—by working on the long slit.

10

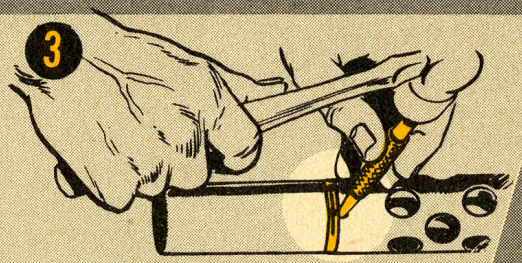
You also wanna clean the booster section of the flash hider on the 1919A6 now and again. No sweat on this job. Pull off the retaining pin assembly . . . remove the flash hider . . . and start cleaning.

2



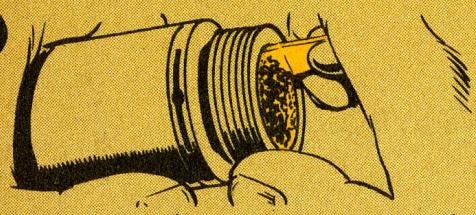
Now . . . let's unstake the bearing. See where the bearing band is staked into the barrel jacket?

3



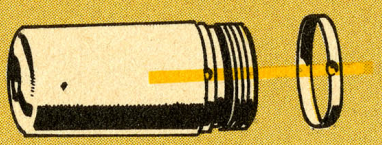
OK . . . stick the point of the punch in the spot between the band and slot in the barrel jacket and give a few taps with the hammer.

5



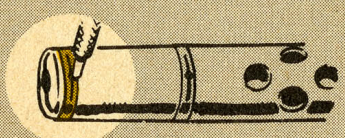
The important thing is to scrape away the carbon. A pen knife'll do the trick. Be careful you don't scratch the part of the bearing that bears against the barrel. Brush the threads and replace the bearing.

6



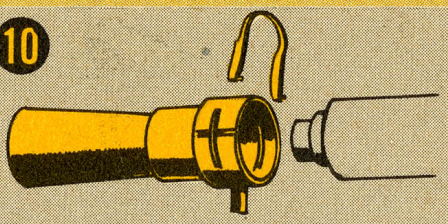
It's not likely to happen, but if the band slips off when you're cleaning the bearing, put it back on so's the half moon cut in the bearing lines up with the staked section of the band. The stake on the other side of the band will line up automatically.

9



In case your machine gun is like the one in the picture, you also wanna remove the second band so you can clean the plug. You stake and unstake the second band same as the other one — by working on the long slit.

10



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LOOK, MA... NO WHEELS

You've gotta have wheels to move field and antiaircraft artillery pieces—that's for sure.

More'n one guy, tho, has been driving a prime mover when he felt a sudden tug. Seconds later... a bogie wheel, or maybe a tire, rolled by.

That kind of treatment is rough on both the weapon and the bogie. Even if the wheel doesn't come off, loose wheel nuts can mean damage to the wheel studs. And loose rim ring nuts can give the rim ring studs a battering.

It means a grunt or two a nut, but check both kinds of nuts about once a month.

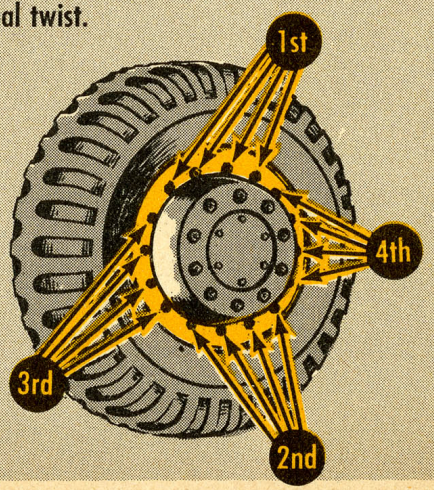
Rim Ring Nuts

On weapons with removable bogies—like the Skysweeper—remove the bogie from under the gun. This takes the weight off the tires and makes the job of tightening the rim ring nuts a lot easier and safer.

When you try to tighten a rim nut on a tire loaded with air, you're pushing against the outward pressure of the air in the tube. The air could get resentful... let go... and take the nut, stud and all with it.

So after you remove the bogies, deflate the tube about half way. Once the high pressure is out of the tube don't start tightening the nuts at one spot and work your way 'round the wheel.

What you do is tighten a coupla nuts at the top—say four—then go to the four nuts on the opposite side of the tire. Follow this criss-cross route around the tires—working on each nut at least twice and making sure you give each nut a final twist.



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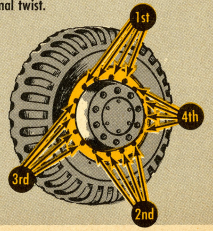
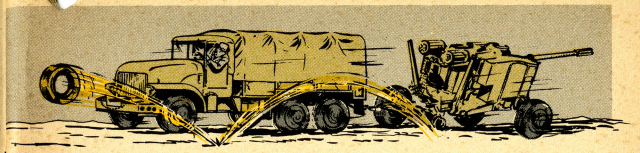
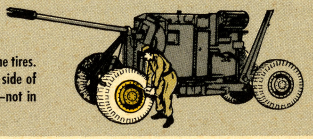


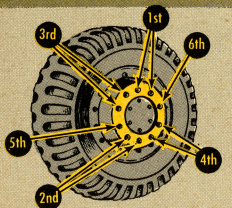


Weapons moved by carriage, like the 105-mm howitzer, are something else again since you don't remove the piece from the carriage. It's no problem, tho. All you've gotta do is jack up the carriage just enough to take the excess weight off the tires.

Maybe you haven't time to deflate the tires. Then caution is the word. Stand to the side of the tire when tightening the rim nuts—not in front of the hub.



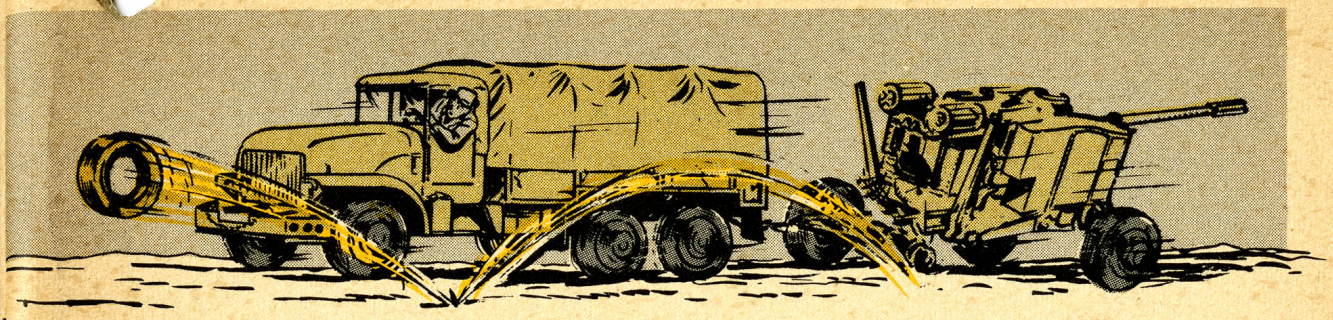
Wheel Stud Nuts



Wheel stud nuts are another story. You tighten 'em with all the air in the tube and the tire touching ground. Hit the nuts on a criss-cross route and don't forget that final grunt on each one.

Another thing... some guys think they lose a wheel because it's on the wrong side of the bogie or carriage. No, sir-e-e-e. The wheels won't come off if they're centered and their stud nuts tightened—no matter what wheels are where.

Course . . . if the hubs and drums are switched around, constant get-up and go plus braking can loosen the nuts. This'll damage the studs and probably mean loss of a wheel since the hubs on the right side of the carriage have wheel studs with left hand threads—and vice versa.



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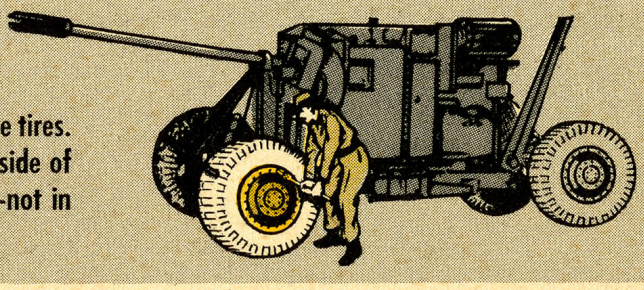

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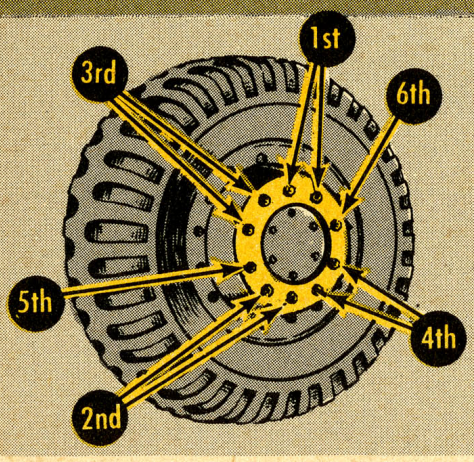

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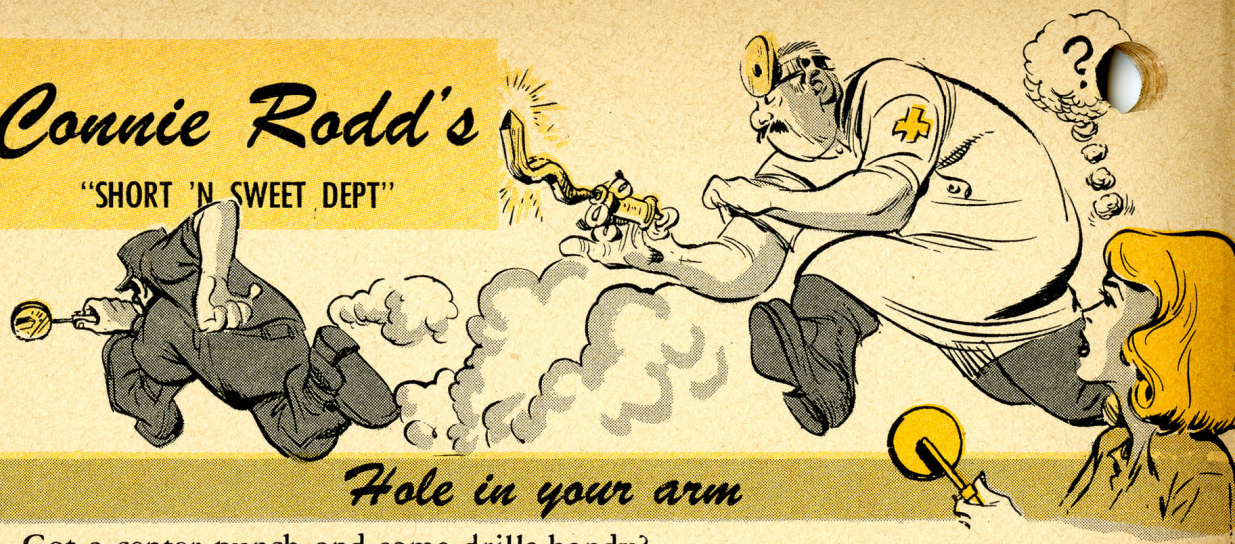
Connie Rodd's

"SHORT 'N SWEET DEPT"



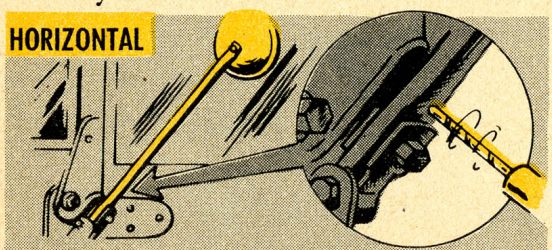
Hole in your arm

Got a center punch and some drills handy?

OK . . . you're all set to fix the rear-view mirror arm on your vehicle so's the water will drain out of the arm instead of building up and causing rust.

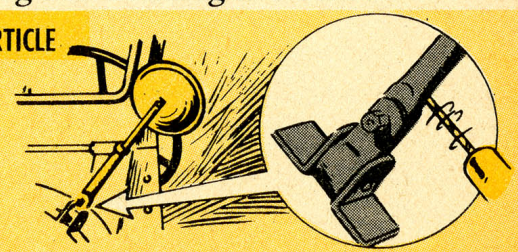
Say the arm is mounted with the attaching bolt running horizontal.

HORIZONTAL



Start a hole with the center punch at the point shown in the first panel and then drill a hole in the underside of the arm with a 3/16-inch drill.

VERTICLE



If the attaching bolt is vertical, you go through the same process, but using a 1/8-inch drill. The second panel shows you where to drill the hole.

Tools for your 424

You mechanics may be having a rough time doing work on the Model 424 GMC 2½-ton stake and platform trucks because you can't find the right tools.

You'll need a tool for removing, replacing and adjusting the rear wheel bearings; a tool for installing and tightening the cylinder head; and a tool for removing and replacing the starter.

You'll have to get the wheel-bearing wrench on local purchase like it says in SR 715-110-50 (2 June 54). The wrench is Kent-Moore J-5955.

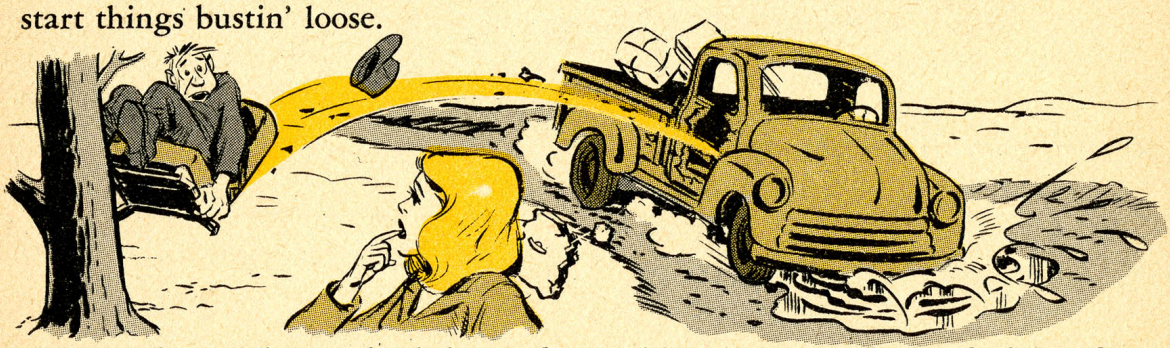
Next, the wrench for the cylinder heads — you can use one found in the second echelon special tool kit, Set A (Ord Stock No. 41-T-3568-530) or in the second echelon special tool kit, Set B (Ord Stock No. 41-T-3569-530). It's called Wrench (cylinder head bolt), Ord Stock No. 41-W-2964-700. You have to use this wrench with Wrench 41-W-3641.

Last, you can find your starter wrench in the same tool kits. It's listed as Wrench (engine: starter removing) Ord Part No. 8708637.

Touchy heads

Gotta watch the adjustment on those seat-back tilt-adjustment-screws you'll find to the rear of the seat adjuster mechanism in your GMC 2½-ton Model 424 trucks and ½-ton Model 3100 Chevvy pick-ups.

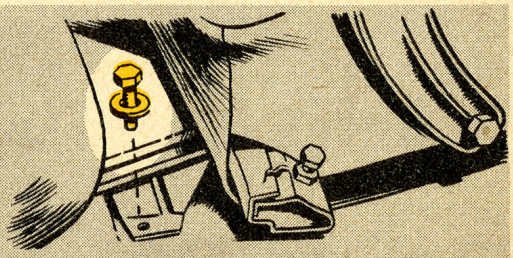
If one of the screws gets adjusted a little higher than its mate, or if the frame anchor bolts aren't drawn up enough, a sudden lurch of the truck can start things bustin' loose.

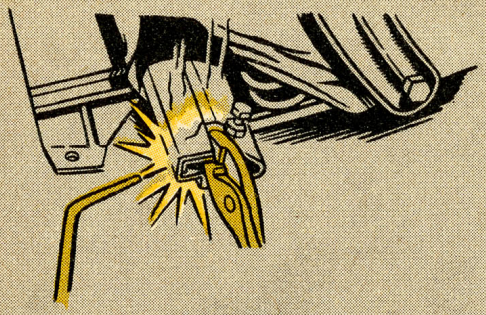


Here's how: The seat back frame doesn't hit squarely on the head of the adjusting screw and bends the bolt sideways, which puts a strain on the channel support. The support usually breaks on its welded spots, as well as anywhere else along the channel. So, keep those screws adjusted to the same height, and keep those anchor bolts tight.

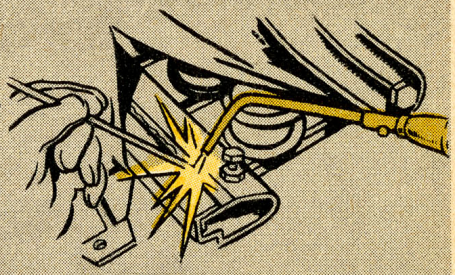
But, if the damage is already done, do this:

1. Remove the four cap screws and washers which attach each seat slide adjuster to the cab floor. Tilt the back of the seat forward and take the seat assembly out of the cab.





2. Peel the upholstery back some so it won't get burned. Then, heat up the bent or broken support and, with a pair of pliers, bend it and the bolt back into place.



3. Lace-weld the places along the channels where the spot welds were broken and any other broken spot. A ⅛-inch lace-weld'll do the trick real nice-like. If the breaks are bad enough, get a small piece of angle-iron and weld it to the support for added strength.

Every time those adjusting screws are screwed up or down, finish off by making those lock nuts good and tight.

Easy let down

Came across a couple of banged-up tailgates on those ¾-ton M101 cargo trailers—and it isn't too hard figuring out what's happening.

Boils down to the same old story—no matter how good the equipment is, it's going to get beat up if you don't take care of it. Now, here's what I've seen on this particular trailer:

A guy would come along, unhook the tailgate and let it drop. BANG—that tailgate smacks against the lifting shackles on the rear cross member. Two dents quicker than you can figure.

Wouldn't it have been a whole lot easier and less damaging to hold onto that tailgate and put 'er down easy-like? You bet your life it would've.

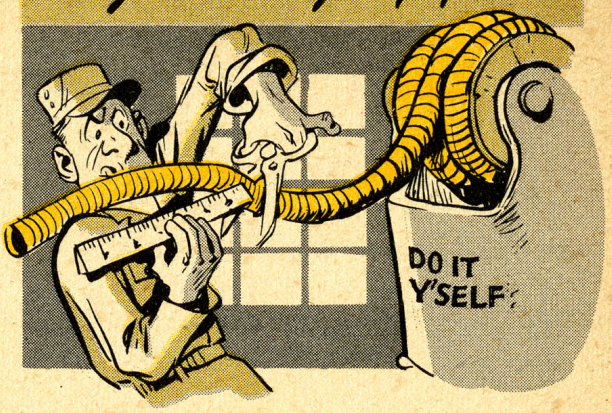
Lookin' glass care

Are you snipers haulin' around an M84 telescope in your pocket, because a carrying case never came with it?

Well, just because there's no Ord 7 out on this M84 telescope and you can't order a case for it, no reason to fret. Instead of letting the lens get scratched up—or taking a chance of losing that lookin' glass—just tell third echelon you're shy on this item. They can order it by asking for FSN 1290-763-1596.

Third echelon won't have trouble getting this case, because it's part of the maintenance equipment for the M84 given in Ord 8 SNL F-289 (4 Nov 52) . . . and part of the sightin' equipment for the M1C and M1D .30-cal snipin' rifles given in Ord 8 SNL B-21 (26 Sept 56).

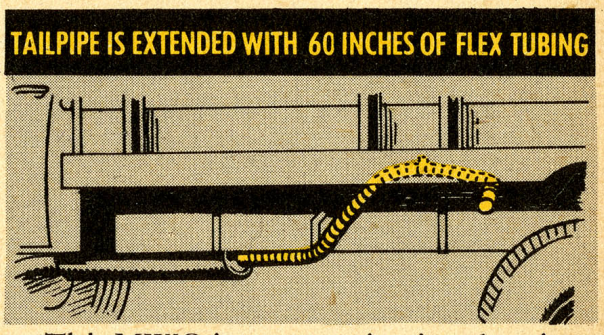
Get a longer pipe



Dig this information that has to go on your Model 424 2½-ton GMC stake and platform trucks. It's important, to say the least.

Because the truck's original tail pipe let some exhaust fumes seep into the cab, MWO Ord G768-W7 (30 Oct 56) now gives you a better and safer tube. Instead of the regular kind of tail pipe, this MWO tells you to put flex tubing on your truck. This tubing, by the way—60 inches of it for each truck—has to be bought locally.

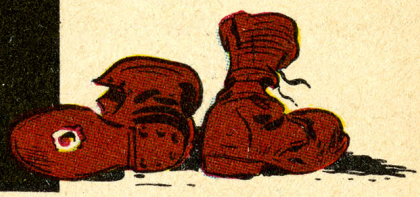
Instead of the pipe being right near the driver's cab like it is now, it extends toward the rear of the truck, so gases will be able to blow themselves into the air well to the rear of the cab.



This MWO is an organizational maintenance job and is marked *urgent*. You know what that means—get it on your truck pronto.

JOE'S DOPE

THE Kindly OL' DISPATCHER'S SHOES

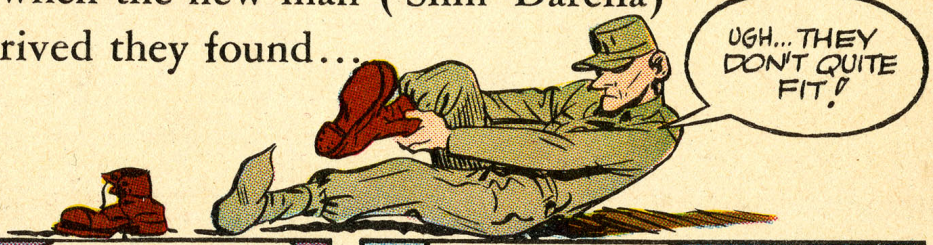


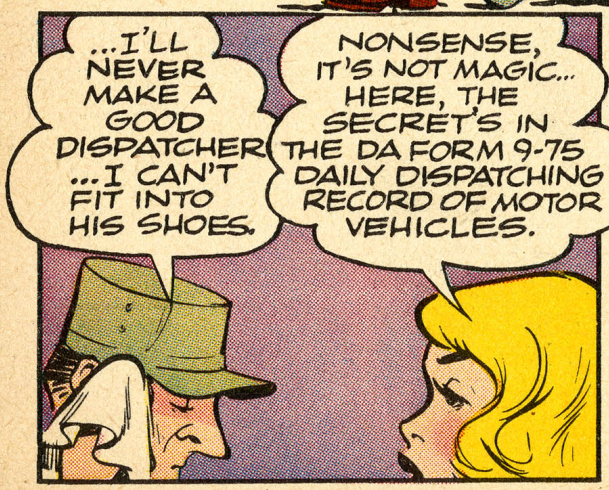
Once upon a time on an army post just this side of a well-known hill...

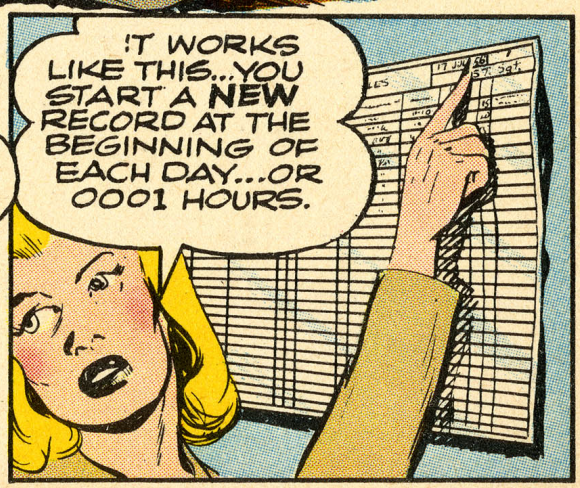
There lived a kindly old dispatcher whose tour of duty was up.

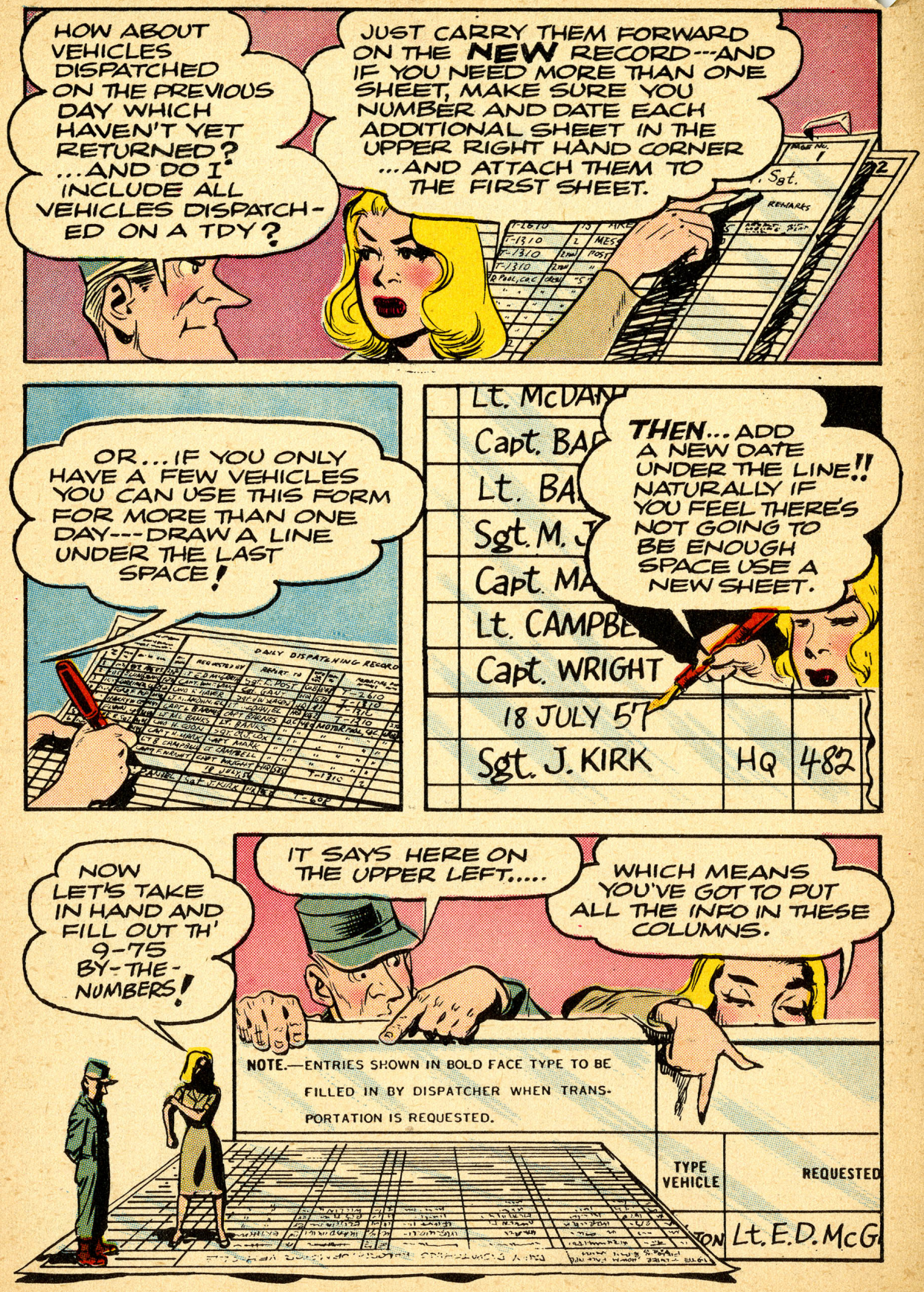
It so happened that a sweet young princess of the corps was passing thru and she was assigned the task of helping fit the new man into the old man's shoes.

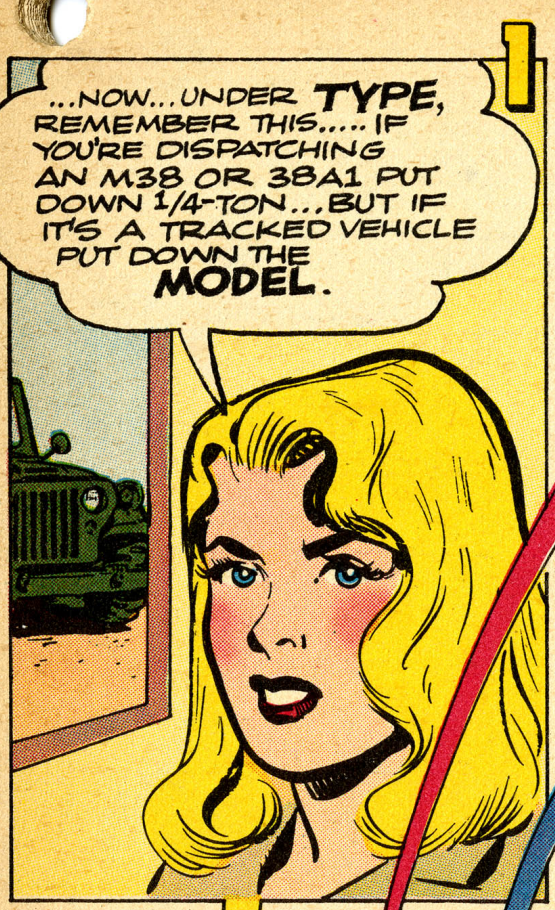
But when the new man ('Slim' Darella) arrived they found...

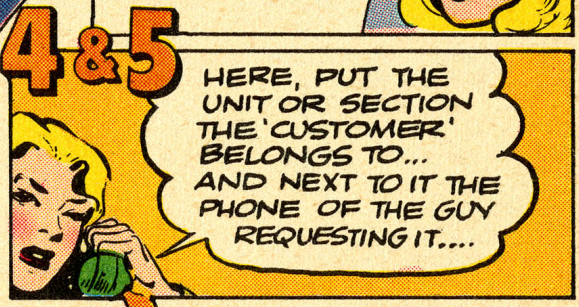






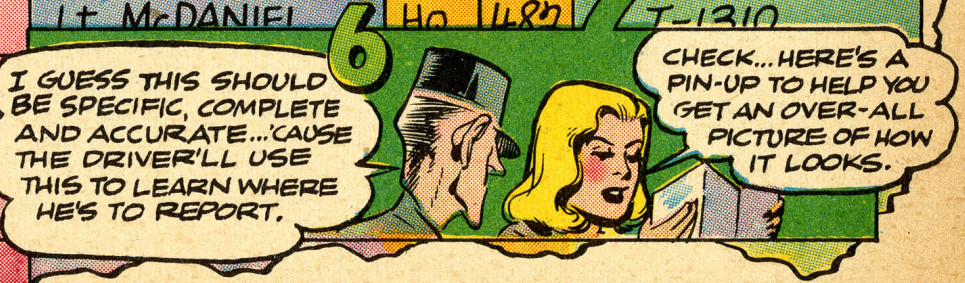

HOW ABOUT VEHICLES DISPATCHED ON THE PREVIOUS DAY WHICH HAVEN'T YET RETURNED? ...AND DO I INCLUDE ALL VEHICLES DISPATCHED ON A TDY?
JUST CARRY THEM FORWARD ON THE NEW RECORD---AND IF YOU NEED MORE THAN ONE SHEET, MAKE SURE YOU NUMBER AND DATE EACH ADDITIONAL SHEET IN THE UPPER RIGHT HAND CORNER ...AND ATTACH THEM TO THE FIRST SHEET.
PAGE NO. 1
2
Sgt.
REMARKS
OR...IF YOU ONLY HAVE A FEW VEHICLES YOU CAN USE THIS FORM FOR MORE THAN ONE DAY---DRAW A LINE UNDER THE LAST SPACE!
DAILY DISPATCHING RECORD
THEN... ADD A NEW DATE UNDER THE LINE!! NATURALLY IF YOU FEEL THERE'S NOT GOING TO BE ENOUGH SPACE USE A NEW SHEET.
Lt. McDAN
Capt. BA
Lt. BA
Sgt. M. J
Capt. MA
Lt. CAMPBE
Capt. WRIGHT
18 JULY 57
Sgt. J. KIRK
HQ
482
NOW LET'S TAKE IN HAND AND FILL OUT TH' 9-75 BY-THE-NUMBERS!
IT SAYS HERE ON THE UPPER LEFT.....
WHICH MEANS YOU'VE GOT TO PUT ALL THE INFO IN THESE COLUMNS.
NOTE.—ENTRIES SHOWN IN BOLD FACE TYPE TO BE FILLED IN BY DISPATCHER WHEN TRANSPORTATION IS REQUESTED.
TYPE VEHICLE
REQUESTED
Lt. E.D. McG





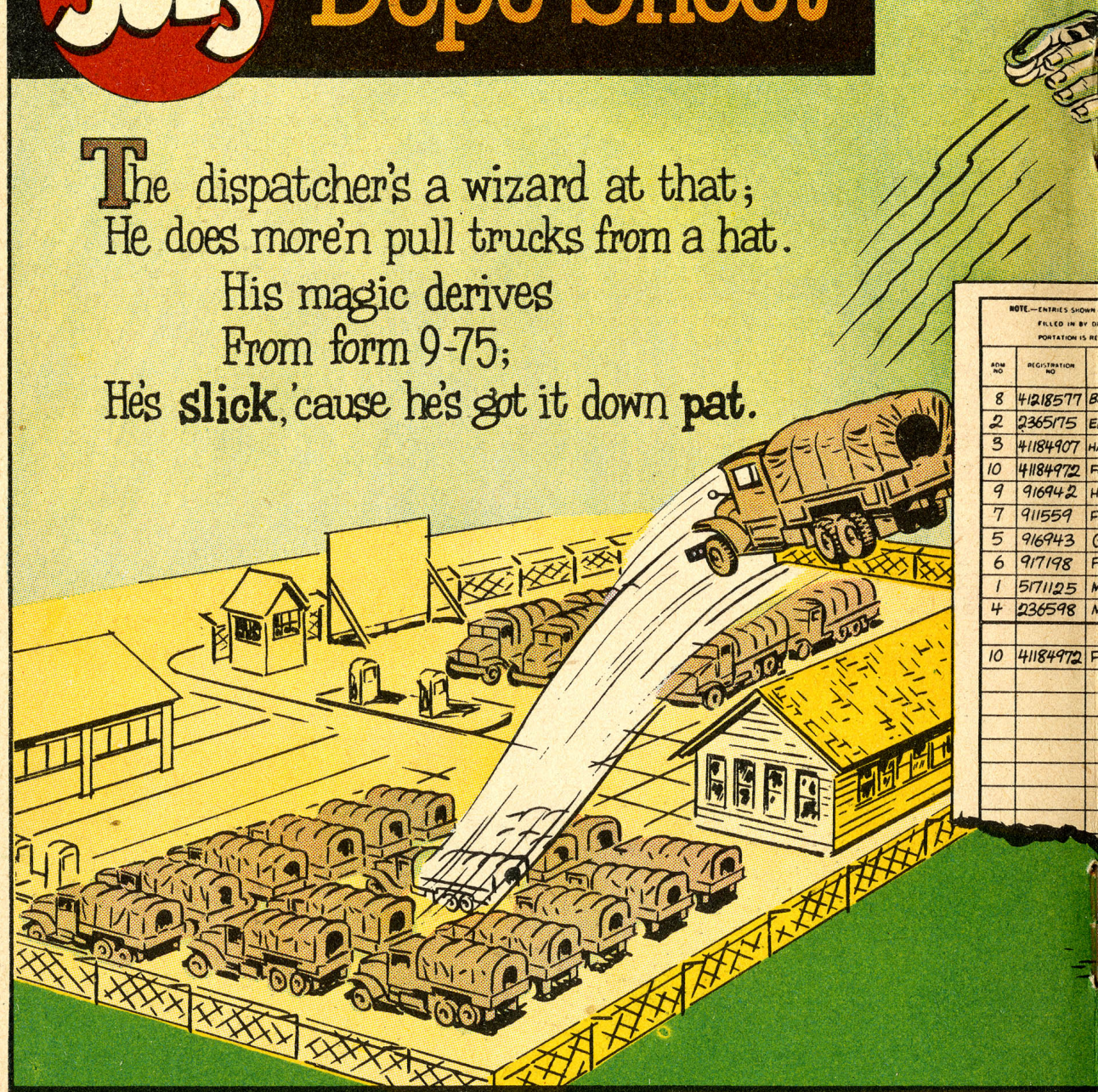
DAILY DISPATCHING RECORD OF MOTOR VEI

TYPE VEHICLE	REQUESTED BY	REPORT TO	UNIT OR SECTION	PHONE EXT. NO.	REPORTING POINT ADDRESS OR UNIT
2½ TON	Lt. E.D. McGRATH	Sgt. R. POST	Co. B	848	T-2610
¼ TON	Capt. WM. T. GANT	Capt. GANT	Hq	573	T-13
2½ TON	CWO R. HAVER	Sgt. J.W. SEACRIST	Hq	381	1310
2½ TON	Lt. M. McDANIEL	Lt. McDANIEL	Hq	482	T-1310
M48	Capt. L. BARNES				
M47	Lt. M.L. BANKS				
M48	CWO H. COON				
M48	Capt. H. MARK				



JOE'S Dope Sheet

The dispatcher's a wizard at that;
He does more'n pull trucks from a hat.
His magic derives
From form 9-75;
He's **slick**, 'cause he's got it down **pat**.



ADM NO	REGISTRATION NO	
8	41218577	B
2	2365175	E
3	41184907	H
10	41184972	F
9	916942	H
7	911559	F
5	916943	C
6	917198	F
1	5171125	M
4	236598	M
10	41184972	F

NOTE.—ENTRIES SHOWN
FILLED IN BY D
PORTATION IS RE

WE HAVE THE WORLD'S BEST EQU

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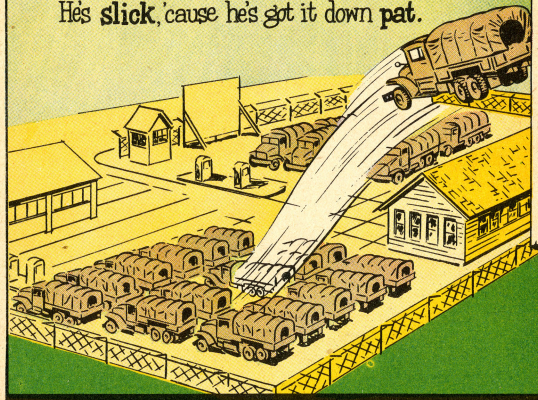
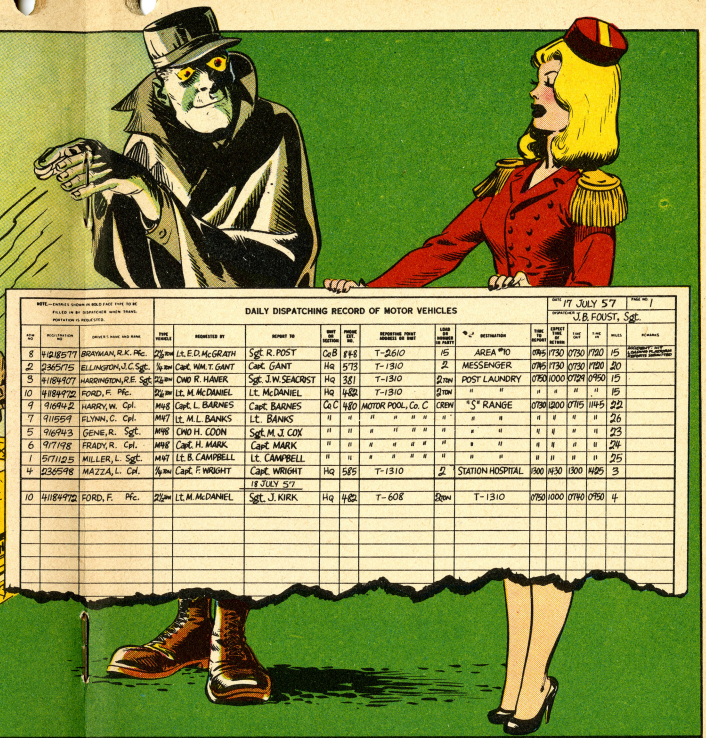




NOTE.—ENTRIES SHOWN IN BOLD FACE TYPE TO BE FILLED IN BY DISPATCHER WHEN TRANS. PORTATION IS REQUESTED.

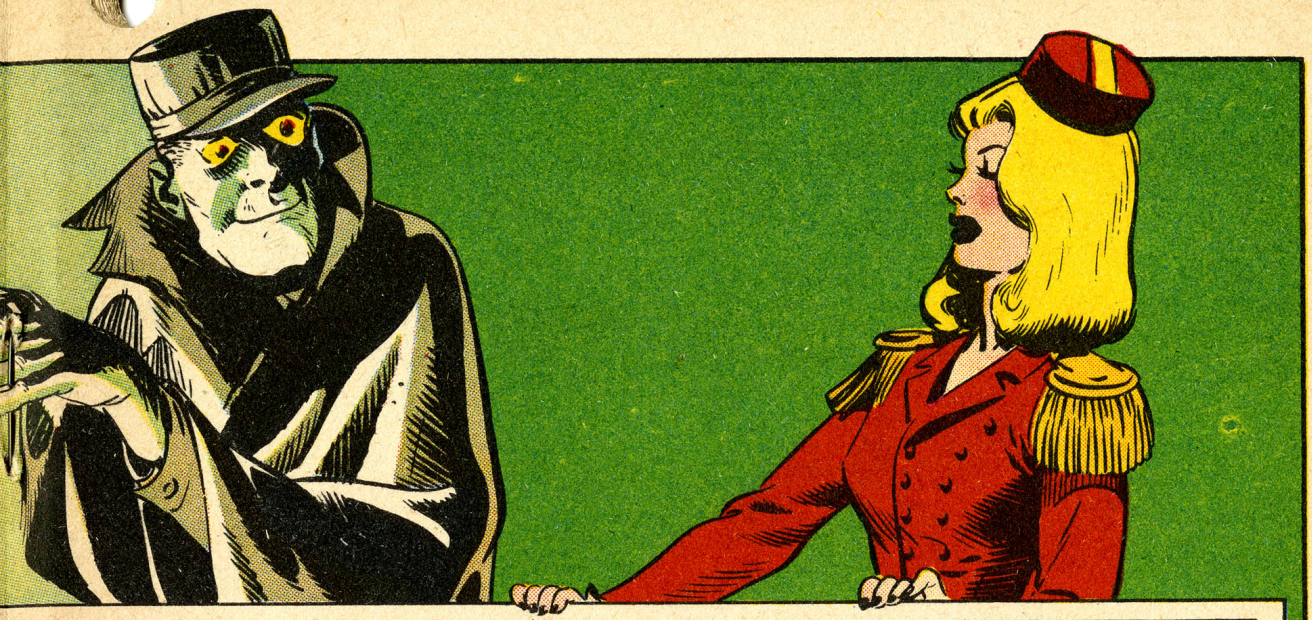
DAILY DISPATCHING RECORD OF MOTOR VEHICLES

DATE 17 JULY 57 PAGE NO. 1

DISPATCHER J.B. FOUST, Sgt.

ITEM NO.	REGISTRATION NO.	DRIVER'S NAME AND RANK	TYPE VEHICLE	REQUESTED BY	REPORT TO	UNIT OR SECTION	PHONE EXT. NO.	REPORTING POINT NUMBER OR UNIT	LOAD OR NUMBER OF PARTY	DESTINATION	TIME TO REPORT	EXPECT TIME OF RETURN	TIME OUT	TIME IN	MILES	REMARKS
8	41218577	BRAYMAN, R.K. Pfc.	2½ TON	Lt. E.D. McGRATH	Sgt. R. POST	Co B	848	T-2610	15	AREA #10	0745	1730	0730	1720	15	ADDITIONAL SHIP LOADING AND DISPATCH SHOULD BE DIRECTED
2	2365175	ELLINGTON, J.C. Sgt.	¼ TON	Capt. WM. T. GANT	Capt. GANT	Hq	573	T-1310	2	MESSENGER	0745	1730	0730	1720	20	
3	41184907	HARRINGTON, R.E. Sgt.	2½ TON	CWO R. HAVER	Sgt. J.W. SEACRIST	Hq	381	T-1310	2 TON	POST LAUNDRY	0750	1000	0729	0950	15	
10	41184972	FORD, F. Pfc.	2½ TON	Lt. M. McDANIEL	Lt. McDANIEL	Hq	482	T-1310	2 TON	" "	"	"	"	"	15	
9	916942	HARRY, W. Cpl.	M48	Capt. L. BARNES	Capt. BARNES	Co C	480	MOTOR POOL, Co. C	CREW	"S" RANGE	0730	1200	0715	1145	22	
7	911559	FLYNN, C. Cpl.	M47	Lt. M.L. BANKS	Lt. BANKS	"	"	" " " "	"	" "	"	"	"	"	26	
5	916943	GENE, R. Sgt.	M48	CWO H. COON	Sgt. M. J. COX	"	"	" " " "	"	" "	"	"	"	"	23	
6	917198	FRADY, R. Cpl.	M48	Capt. H. MARK	Capt. MARK	"	"	" " " "	"	" "	"	"	"	"	24	
1	5171125	MILLER, L. Sgt.	M47	Lt. B. CAMPBELL	Lt. CAMPBELL	"	"	" " " "	"	" "	"	"	"	"	25	
4	2365198	MAZZA, L. Cpl.	¼ TON	Capt. F. WRIGHT	Capt. WRIGHT	Hq	585	T-1310	2	STATION HOSPITAL	1300	1430	1300	1425	3	
					18 JULY 57											
10	41184972	FORD, F. Pfc.	2½ TON	Lt. M. McDANIEL	Sgt. J. KIRK	Hq	482	T-608	2 TON	T-1310	0750	1000	0740	0950	4	

WE HAVE THE WORLD'S BEST EQUIPMENT... *Take care of it*



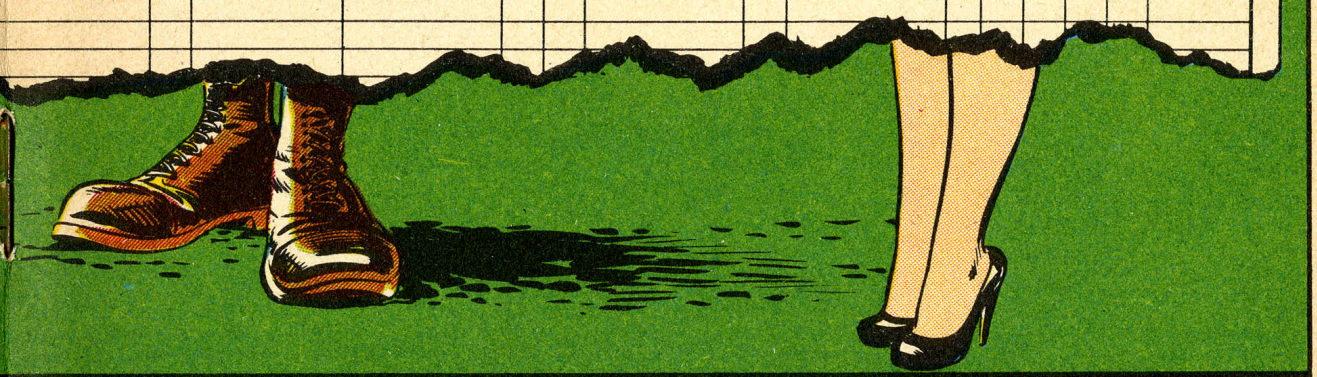
N IN BOLD FACE TYPE TO BE DISPATCHER WHEN TRANS-REQUESTED.

DAILY DISPATCHING RECORD OF MOTOR VEHICLES

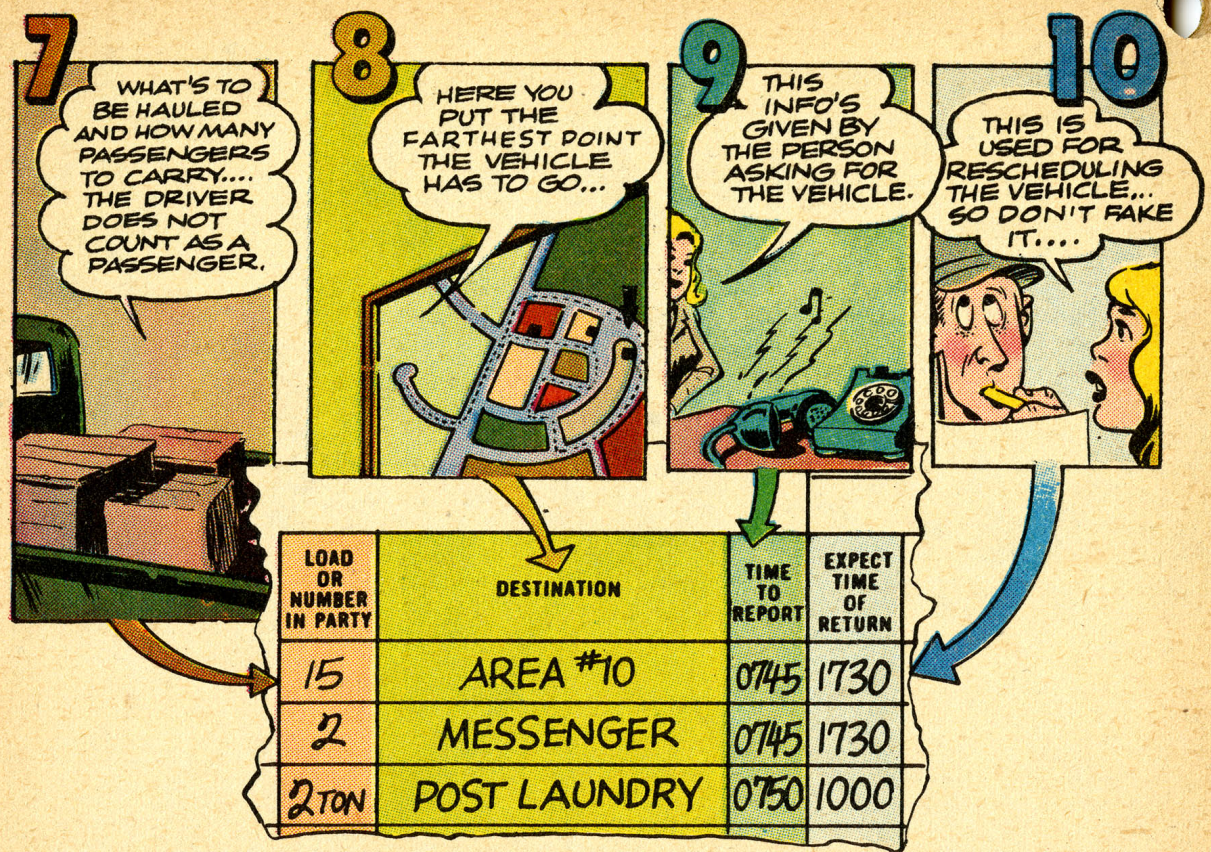
DATE 17 JULY 57 PAGE NO. 1

DISPATCHER J.B. FOUST, Sgt.

DRIVER'S NAME AND RANK	TYPE VEHICLE	REQUESTED BY	REPORT TO	UNIT OR SECTION	PHONE EXT. NO.	REPORTING POINT ADDRESS OR UNIT	LOAD OR NUMBER IN PARTY	DESTINATION	TIME TO REPORT	EXPECT TIME OF RETURN	TIME OUT	TIME IN	MILES	REMARKS
BRAYMAN, R.K. Pfc.	2½ TON	Lt. E.D. McGRATH	Sgt. R. POST	Co B	848	T-2610	15	AREA #10	0745	1730	0730	1720	15	ACCIDENT REPORTS SUBMITTED
ELLINGTON, J.C. Sgt.	¼ TON	Capt. WM. T. GANT	Capt. GANT	Hq	573	T-1310	2	MESSENGER	0745	1730	0730	1720	20	
HARRINGTON, R.E. Sgt.	2½ TON	CWO R. HAVER	Sgt. J.W. SEACRIST	Hq	381	T-1310	2 TON	POST LAUNDRY	0750	1000	0729	0950	15	
FORD, F. Pfc.	2½ TON	Lt. M. McDANIEL	Lt. McDANIEL	Hq	482	T-1310	2 TON	" "	"	"	"	"	15	
HARRY, W. Cpl.	M48	Capt. L. BARNES	Capt. BARNES	Co C	480	MOTOR POOL, Co. C	CREW	"S" RANGE	0730	1200	0715	1145	22	
FLYNN, C. Cpl.	M47	Lt. M.L. BANKS	Lt. BANKS	"	"	" " " "	"	" "	"	"	"	"	26	
GENE, R. Sgt.	M48	CWO H. COON	Sgt. M.J. COX	"	"	" " " "	"	" "	"	"	"	"	23	
FRADY, R. Cpl.	M48	Capt. H. MARK	Capt MARK	"	"	" " " "	"	" "	"	"	"	"	24	
MILLER, L. Sgt.	M47	Lt. B. CAMPBELL	Lt. CAMPBELL	"	"	" " " "	"	" "	"	"	"	"	25	
MAZZA, L. Cpl.	¼ TON	Capt. F. WRIGHT	Capt. WRIGHT	Hq	585	T-1310	2	STATION HOSPITAL	1300	1430	1300	1425	3	
			18 JULY 57											
FORD, F. Pfc.	2½ TON	Lt. M. McDANIEL	Sgt. J. KIRK	Hq	482	T-608	2 TON	T-1310	0750	1000	0740	0950	4	

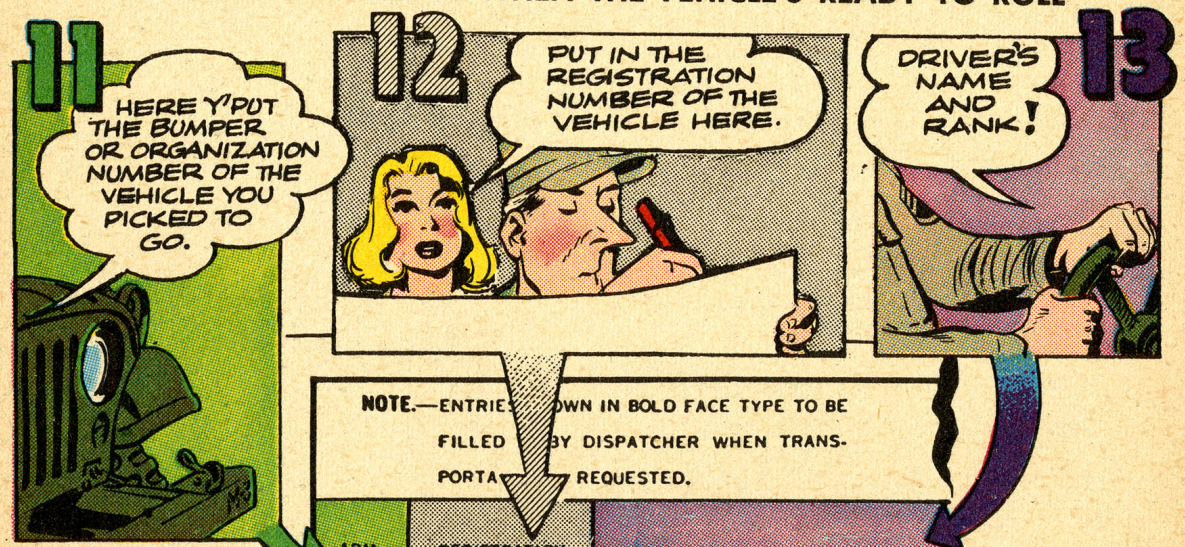


UIPMENT... Take care of it



LOAD OR NUMBER IN PARTY	DESTINATION	TIME TO REPORT	EXPECT TIME OF RETURN
15	AREA #10	0745	1730
2	MESSENGER	0745	1730
2 TON	POST LAUNDRY	0750	1000

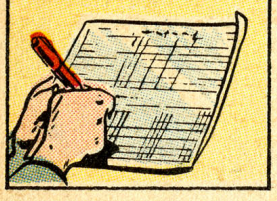
THESE YOU FILL IN WHEN THE VEHICLE'S READY TO ROLL



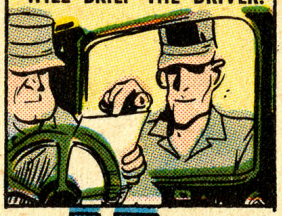
NOTE.—ENTRIES SHOWN IN BOLD FACE TYPE TO BE FILLED IN BY DISPATCHER WHEN TRANSPORTATION REQUESTED.

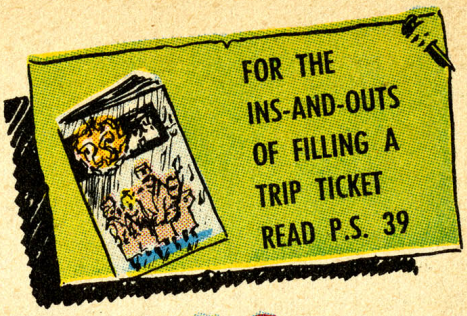
ADM. NO.	REGISTRATION NO.	DRIVER'S NAME AND RANK
8	42185777	BRAYMAN, R.K. Pfc.
2	2365175	ELLINGTON, J.C. Sgt.
3	41184907	HARRINGTON, R.E. Sgt.
10	41184972	FORD, F. Pfc.

ENTER THE INFO ON THE DD FORM 110 (TRIP TICKET)

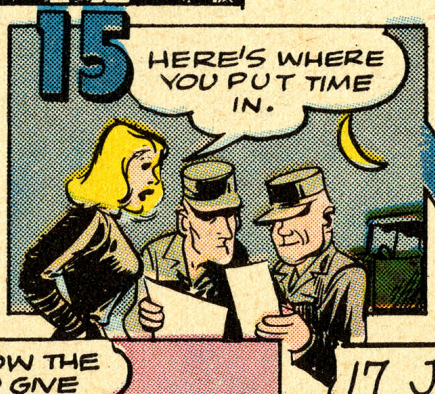


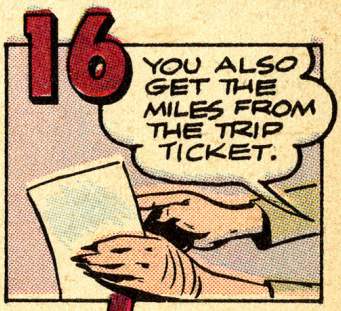
THEN SIGN YOUR NAME...THIS FORM WILL BRIEF THE DRIVER.

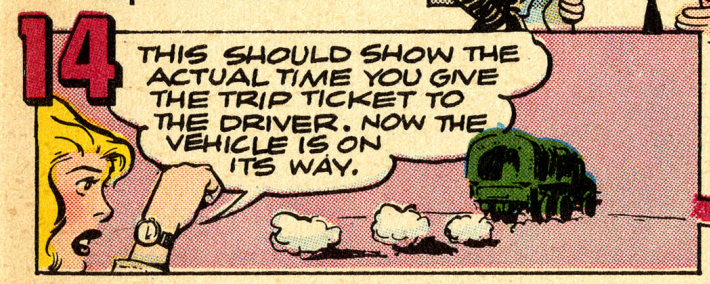




When the vehicle gets back to the motor pool, you have to make sure the driver's filled in the trip ticket the way he's supposed to 'cause that's where you get the rest of the info for your dispatch record.



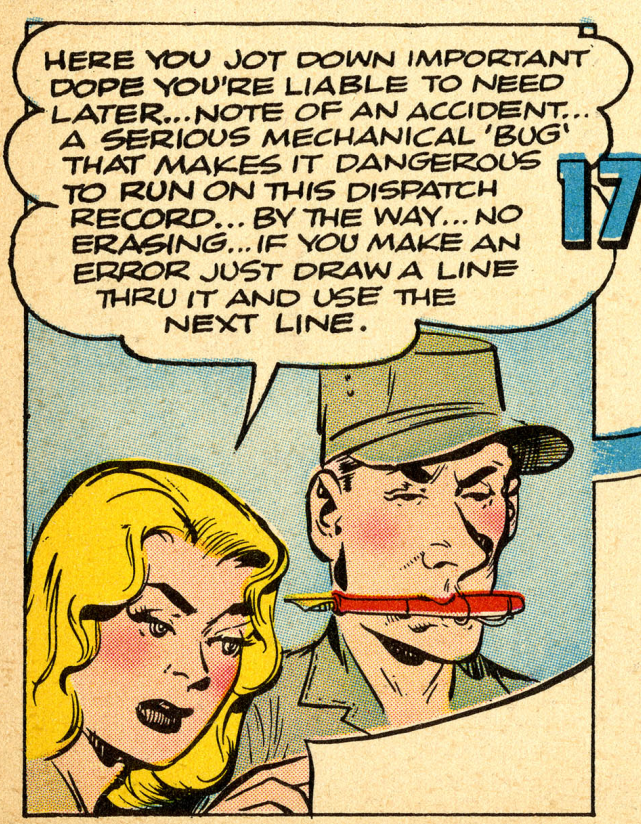


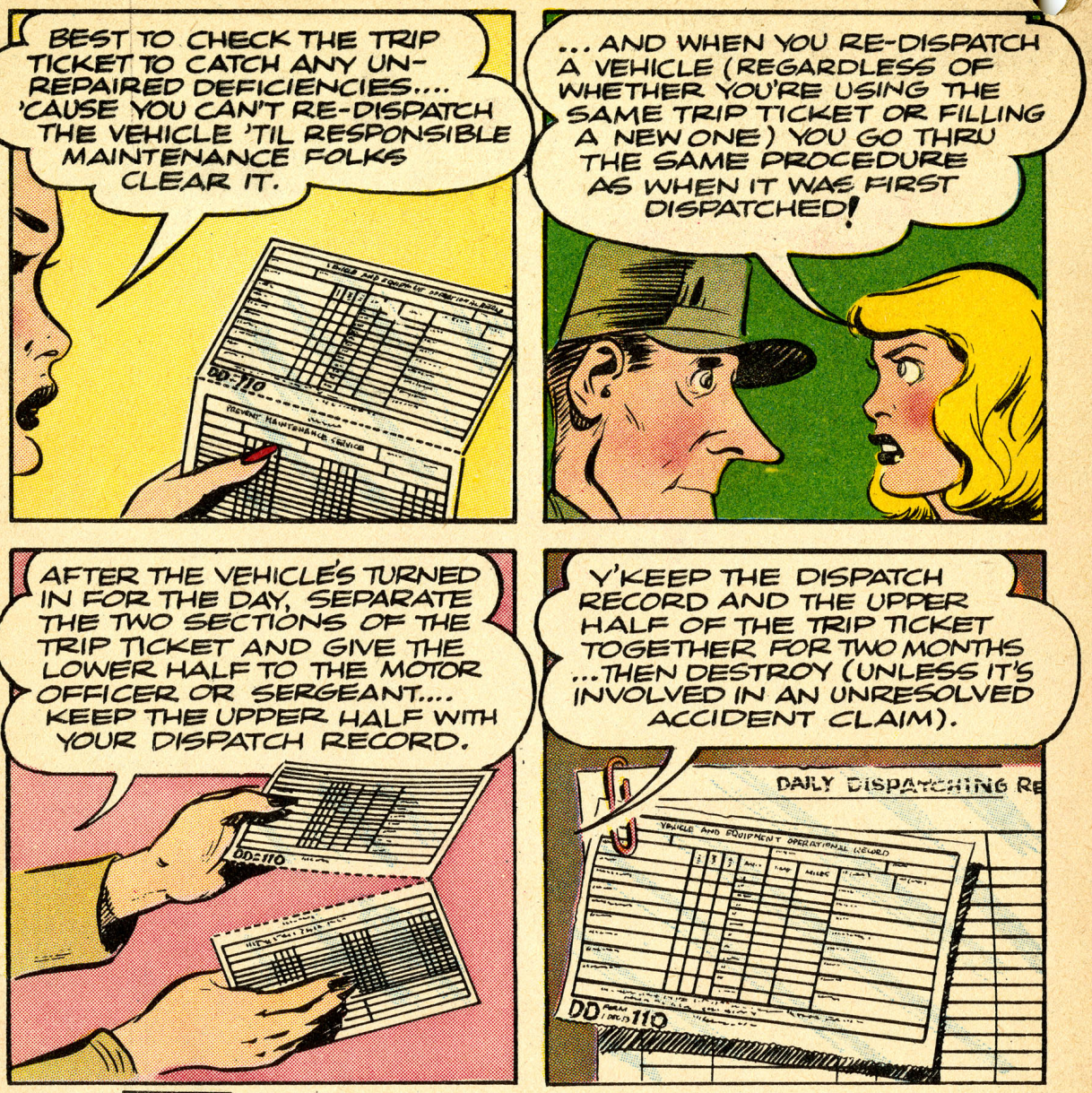


17 JULY 57 PAGE NO. 1

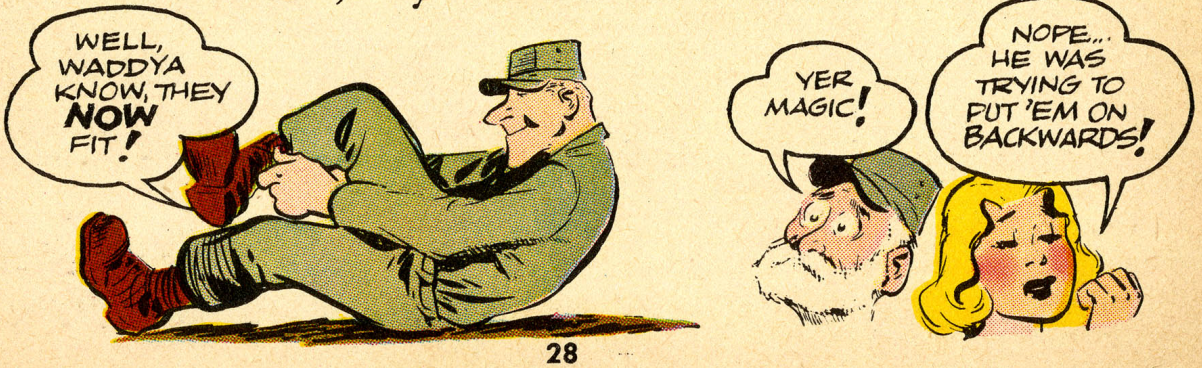
CHER J.B. [illegible], Sgt.

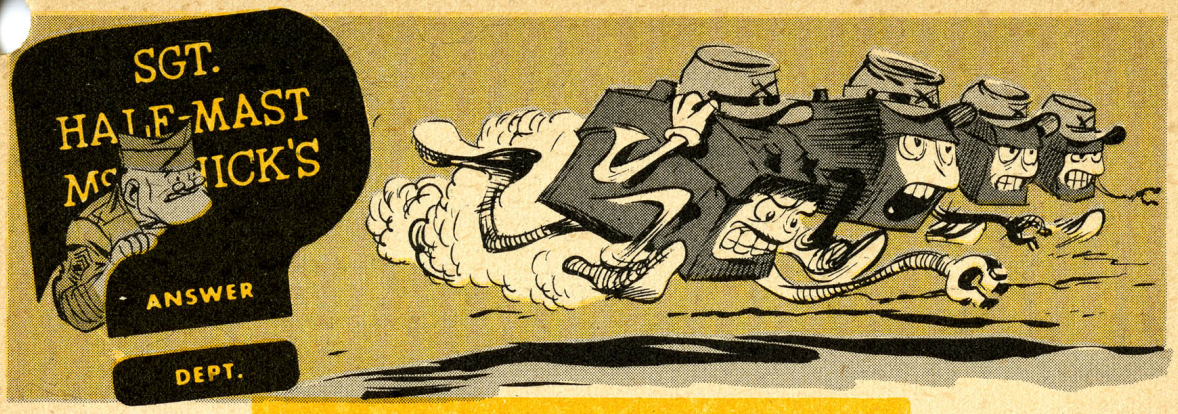
TIME OUT	TIME IN	MILES	REMARKS
0730	1720	15	
0730	1720	20	ACCIDENT: HIT LOADING PLATFORM REPORTS SUBMITTED
0729	0950	[illegible]	
"	"	15	
0715	[illegible]	22	
"	"	26	
	"	23	
"	"	24	
"	"	25	
1300	1425	3	
0740	0950	4	





And so, having thus briefed young 'Slim' Darella... the princess (Connie) said, "try on these shoes now..."





CHARGE—WITH YOUR CAPS ON

Dear Half-Mast,

What's the deal when charging batteries. Do I leave the caps on, or take 'em off?

Cpl P. R.

Dear Cpl P. R.,

You leave the caps on your batteries when charging them, same as the caps are on while the vehicle generator is charging the battery. When the gases in your military battery build up to a pressure of half a pound per square inch, the vent valve in the caps opens and lets off that pressure. On commercial batteries, the caps are always vented.

Keeping the caps in place prevents the bubbles of gas from throwing out droplets of electrolyte and messing things up. Makes for a cleaner battery shop.

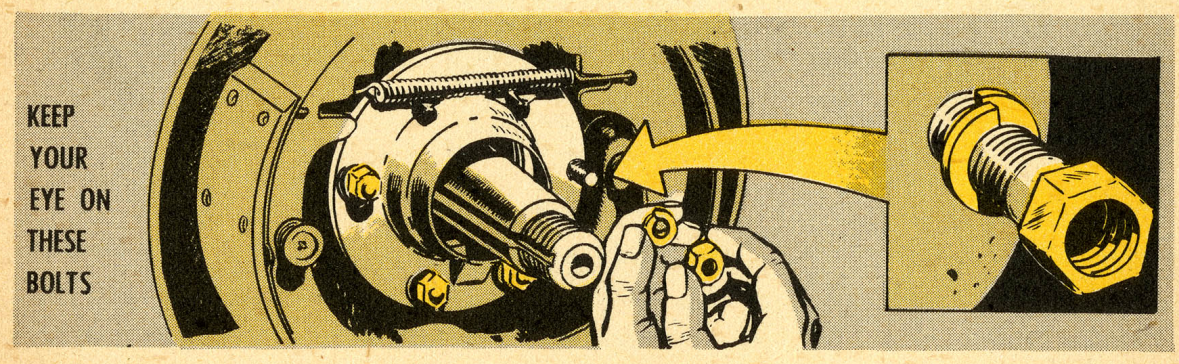
Half-Mast

LOOSE NUTS

Dear Half-Mast,

On some of our earlier-model M38A1 Jeeps, we've noticed that the brake backing plates are coming loose. As you know, six bolts hold that plate in place. Do you have any idea as to how we can keep them tight?

CWO J. L. P.



Dear CWO J. L. P.,

All new production M38A1's coming off the line have hex nuts (Ord Stock No. H001-4167601) and split-type lockwashers (Ord Stock No. H001-7025741)

holding those backing plates. If you're having trouble keeping your nuts tight, why not give these a try.

Torque the nuts to 25 to 35 foot pounds and check your axle shaft end play. It should be .003 to .007 of an inch.

Half-Mast

LEAKY JEEP SEALS

Dear Half-Mast,

We've got some Jeeps that're dripping lube out through their steering-knuckle oil seals. Been trying to tighten those neoprenes up by putting permatex on 'em.

What do you think?

MSgt J. H. S.

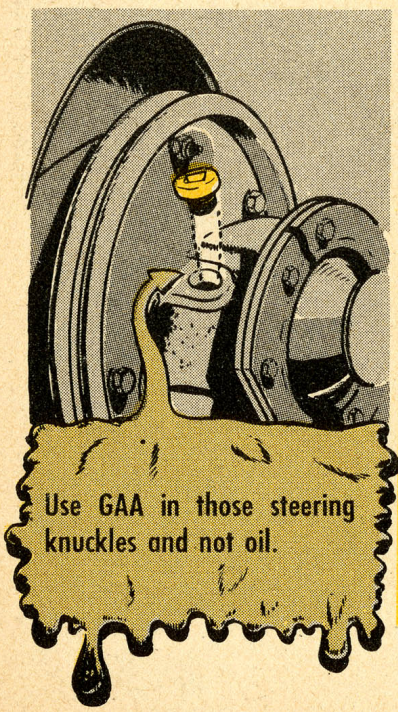
Dear MSgt J. H. S.,

No dice, Sarge. If that permatex gets into the seal's grooves, it stops the seal spring from seating the seal—and lube'll get past the seal.

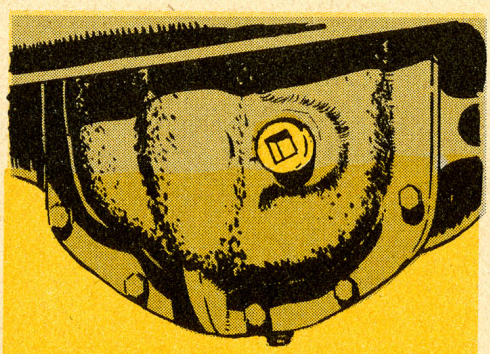
One good thought, tho, is to put some brake fluid on that seal before putting 'er in. This helps the seal to seat itself properly in the retaining grooves.

A little grease around that oil seal is OK, especially when you use a neoprene seal. That neoprene seal takes a while to wear in—till she does, you'll get grease seepage.

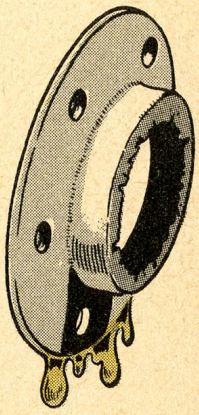
If you're sure that it is leaking, check out a few things:



Use GAA in those steering knuckles and not oil.



Overfilling the axle differential could send lube eking into the axle housing —then out round the steering knuckles. Keep it below the filler plug.



Check for ruptured axle shaft oil seals.

Half-Mast

BIT O' KENTUCKY PLAY

Dear Half-Mast,

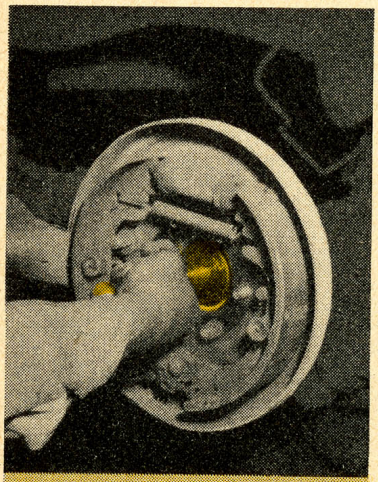
How can you measure end-play without a special tool: Talking about TM 9-8012 (Jan 56), para 216a (6), which calls for .003 to .007-inch end-play in the M38 Jeep's rear axle shaft. TM 9-8014 (Apr 55), on the other hand, says naught 'bout it for the M38A1 Jeep.

Figuring a guy can't measure this end-play without a gage, I guess the end-play isn't too important . . . or is it?

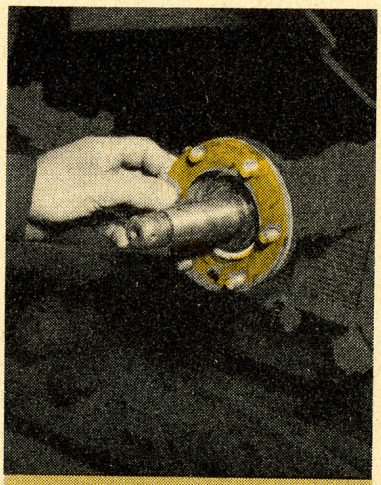
Pfc L. J.

Dear Pfc L. J.,

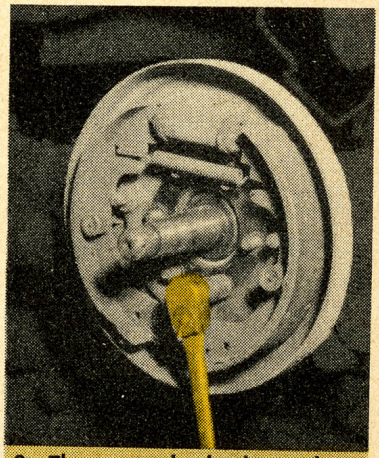
Yep—that end-play is mighty important. And you don't need a special tool, either—just feeling fingers. It's done like this—



1. Push-pull the end of the shaft with your hand. Feel any end play?



2. If not, remove the nuts and backing plate, and install a .005-inch shim.



3. Then, put the backing plate back on and tighten the nuts. Feel again. If there's end play, it'll fall between .003 and .007 inch.

If there's still no end play, remove the nuts and backing plate again. Put in another .005-in shim—or take out the other .005-in shim and add a .010-in shim instead. Keep adding .005-in shims till you feel end-play. Once you do feel it, stop. You can bet your last buck that the end-play will fall between .003 and .007.

As for those shims, you can get them by ordering Ord Stock No. G740-7374981 (FSN 2520-737-4981). They're in your Ord 7 SNL G758 (Apr 56) and Ord 7 SNL G740 (June 56).

Half-Mast

RUBBER MAINTENANCE

Dear Half-Mast,

We have always been taught to keep paint off the rubber parts of our vehicles. But recently this question has popped up again, and some guys are "Doubting Thomases."

Their doubt seems to be based on the fact that there don't seem to be any directives telling them to keep paint off rubber. Got anything on this?

Sgt R. T.

Dear Sgt R. T.,

There are just some things that need rules, laws and directives and others that don't. There isn't any law telling a guy to come in out of the rain—doesn't have to be because that's just common sense. Works about the same way with this paint-vs.-rubber problem.

There are some directives that hit around this subject, but they don't say specifically that paint will be kept off all the rubber parts of a vehicle. Don't see why they should—just like coming in out of the rain is common sense, so is keeping paint off rubber.

All a guy has to do to prove it to himself is to drop a rubber band in a glass filled with gasoline or oil—it's just like putting paint on rubber, because most paints have oil in them.

TM 9-2851 (Dec 47) says on page 78: "When spraying it is necessary to cover all parts such as windows, gages, lubrication fittings, instruments, and **other parts which are not to be painted.**" Now, this last part covers a multitude of sins and leaves room for a man to use his head. Although it doesn't say so, no doubt it means that rubber doesn't get painted.

Ordnance Technical Instruction #360-2-50 (2 Mar 50) says that the painting of vehicle radio harnesses "**hastens the deterioration of rubber.**" Again, although this doesn't say specifically to keep paint off all rubber parts of a vehicle, it can be broadened to include all rubber parts.

What it boils down to is this: Paint eats rubber. There are no directives telling you specifically to keep paint off rubber. If some guys want to use paint on rubber, that's their lookout. But, like staying out in the rain because there's no law telling them to get inside, it's going to do them a lot of harm.

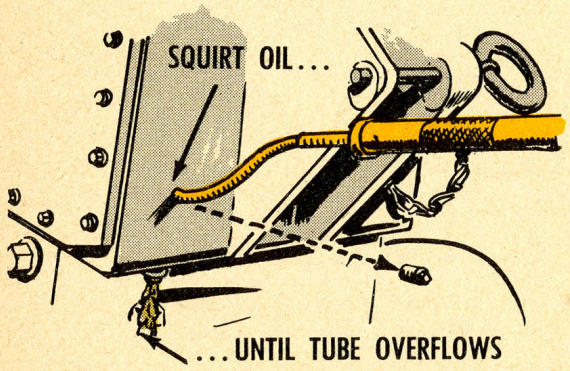
Half-Mast

GET ON THE DIPSTICK

It's a messy job the way you're doing it now... but the oil level in the intermediate gear case of the 120-mm gun's elevating mechanism has gotta be checked every week.

MWO Ord D32-W15 put oil leveling and filling tube assembly 7180583 on your 120. It tells you to check the oil like this:

Plug 219190 is removed and oil is squirted through the hole until the oil



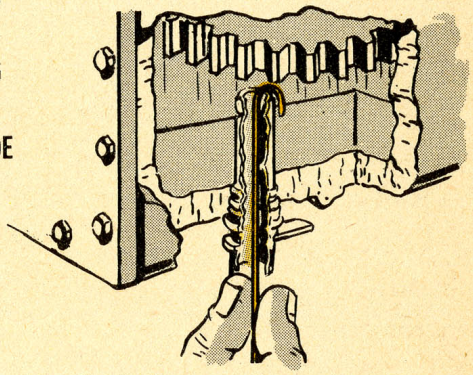
leveling tube overflows. It's a foolproof system, 'cause that tube's actually an overflow standpipe, and you can't overfill the case.

Like it says, the system's foolproof. But it also means that fill equipment is used just for a little ol' oil check . . . and the oil that overflows needs cleaning up.

It's easy to turn that messy job into a slick one . . . make it simple as pulling a dipstick. Less time, less trouble, no fill equipment, no mess. Get a piece of flat wire, or salvage dipstick. Bend it on the end with about a half-inch hook.

Comes time to check the oil, just take the plug out of the tube assembly, and stick your dipstick up into the tube. Hook it over the side of the tube just like when you put a clothes-hanger in a locker.

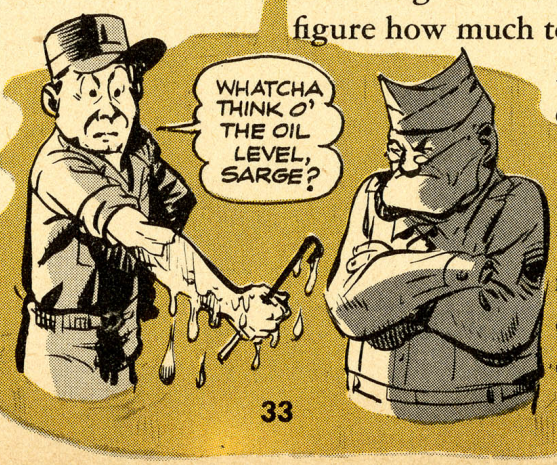
Unhook it, pull it out, and there's the reading.



If the case is full, put the tube plug back in and the job's done. No need to take out the fill plug... or to add and then clean up unneeded oil.

If the case needs oil, you can tell approximately how much by the stick reading. After adding oil a few times according to the reading, a fellow can figure how much to put in so he'll have little or no draining or dripping.

Real simple and real easy. Especially when the mechanism's full, 'cause you don't add unneeded oil that overflows.

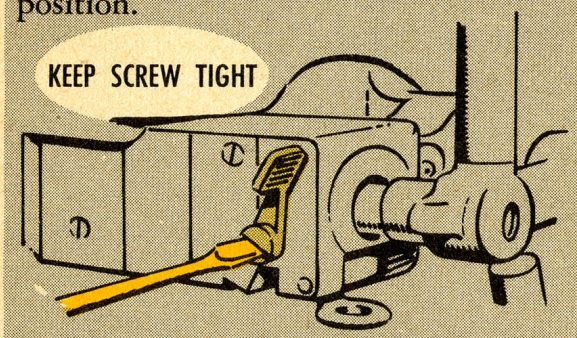


RIGHT PRESCRIPTION

Things have been happening to the T95 firing lock... and that's no good for you guys who fire the M53 155-mm self-propelled gun, the M44 155-mm self-propelled howitzer or the M55 8-in self-propelled howitzer.

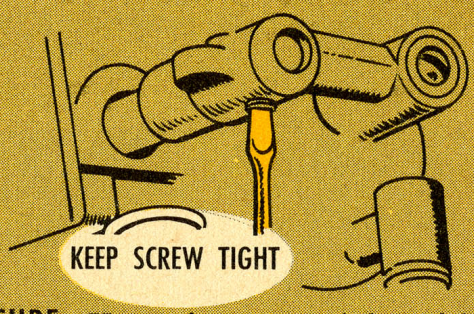
Here's where the firing lock is hurting and what can be done to get rid of the troubles.

TROUBLE: The safety lever screw works loose, throwing the safety lever out of position.



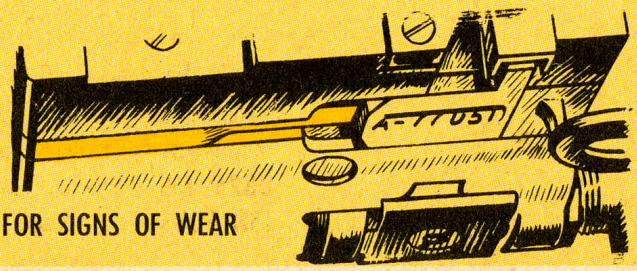
CURE: Tighten the screw before and after firing. Keep checking the position of the safety lever.

TROUBLE: The hammer stem screw wears down and bends, causing the hammer and firing pin to go out of alinement.



CURE: Keep the screw tight. If it is worn or bent, latch onto a new one.

TROUBLE: The sear becomes bent, which causes the hammer stem assembly to let go when the safety lever is moved from "Safe" to "Fire."



WATCH SEAR FOR SIGNS OF WEAR

CURE: Watch the sear with an eagle eye. If you see signs of wear or a bend, get a new one.

There are a coupla more things to keep in mind.

On the M44 155-mm howitzer... MWO D63- W1 replaces the T8 firing lock with the T95. This MWO gives you the new firing lock but restricts you to percussion firing only.

When Ordnance applies MWO D63-W2, the howitzer will be rigged so's you can fire both electrically and by percussion.

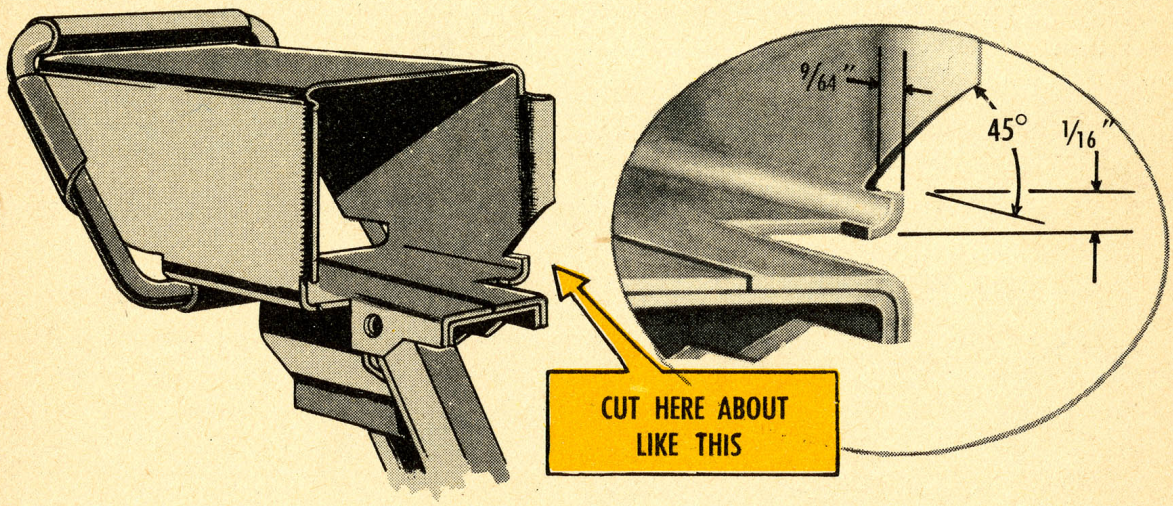
With the M53 and M55, you use nothing but electric firing until you hear otherwise.

And you wanna put up the "caution flag" so you don't short out the wiring harness and recoil break switches.

DON'T BOOT THE CHUTE

No sense to letting go with a swift kick if you can't fit the M1 metallic belt link chute to your M2 .50-cal heavy barrel machine gun.

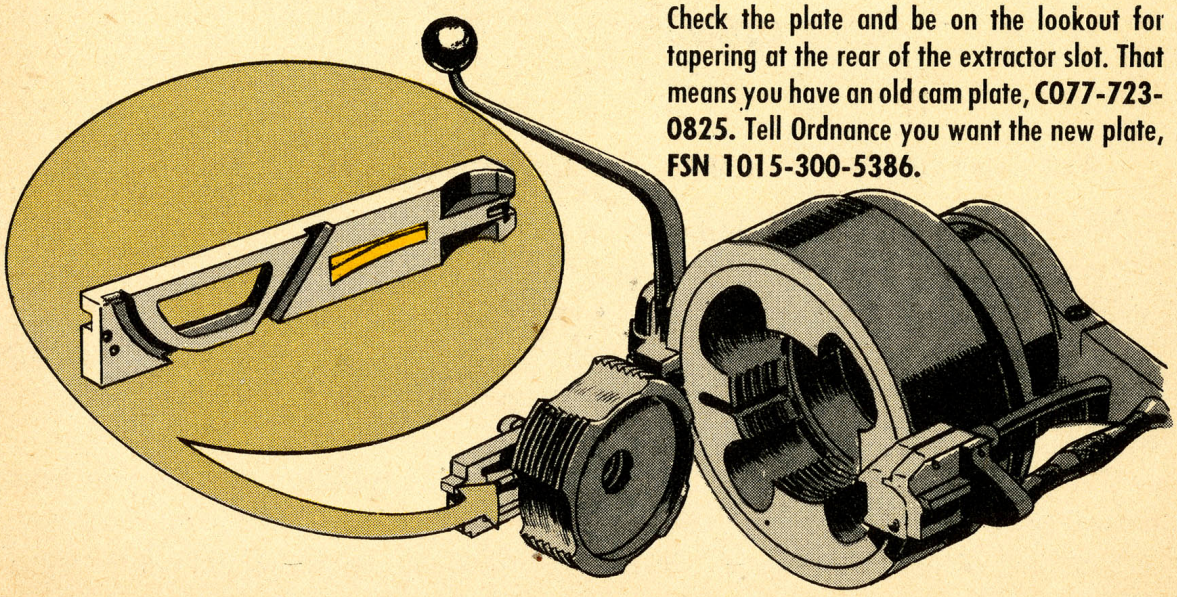
You may have one of the older chutes which need a little cutting to make it fit. Your support unit'll do the job...and then you'll be all set for left to right feeding.



THREAD BURR?

It doesn't do to have threads banging—like when the vent assembly threads are burred by the breechblock threads in the 106-mm recoilless rifle. You get the burring when you have too much play in the breechblock.

Chances are you can blame the cam plate.



Check the plate and be on the lookout for tapering at the rear of the extractor slot. That means you have an old cam plate, C077-723-0825. Tell Ordnance you want the new plate, FSN 1015-300-5386.

MISSILE NOTES

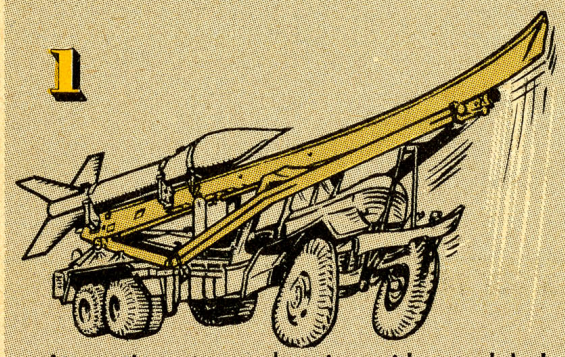
HONEST OPERATION HONEST JOHN

Elevating shafts on the elevating drive of Honest John launchers get banged up with bum operation.

Operating the wrong way either causes damage or does away with safety features in the electrical ignition-interlock-circuit that protects the elevating drive. Don't operate this way:

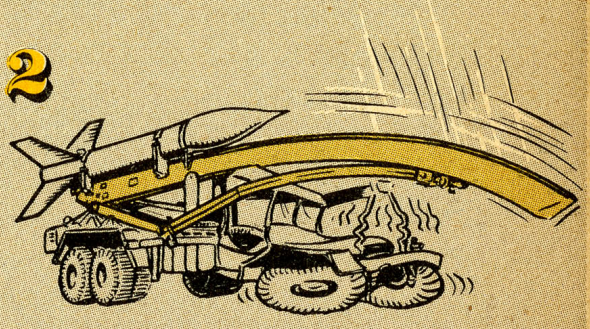
This Is WRONG

1



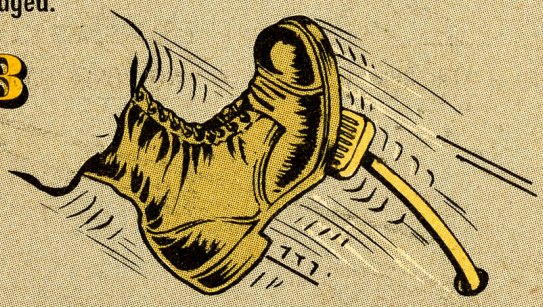
Attempting power elevation with travel lock engaged.

2



Lowering launching beam onto the travel lock too hard.

3



Letting the clutch out quickly for elevation or depression with the motor running at high RPM.

4

Depressing the power-take-off safety lever by hand when the ignition-interlock-circuit is out of order. Now this one is really a prize snafu. It allows the truck motor to run with the power-take-off engaged. Then it's possible to elevate and depress the launching beam when the ignition-interlock-circuit is out of order.

It also eliminates all safety features designed into the ignition-interlock-circuit, which means the beam can over-ride the upper and lower limit switches, start elevation with the elevating drive locked for hand elevation, and cause other damage.

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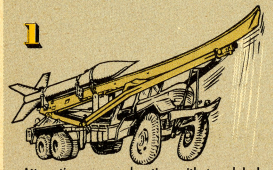
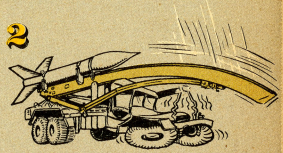


Attempting power elevation with travel lock engaged.

2



Lowering launching beam onto the travel lock too hard.

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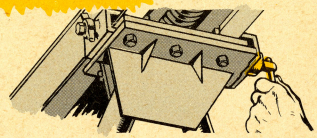
This Is RIGHT

DO THOSE OPERATIONS THIS WAY:

1

Disengage the travel lock before raising the launching beam off it.

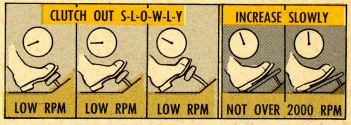


2

Be extra careful lowering the launching beam into position on the travel lock. The transmission should be in FIRST, motor running at idle, and the operator slipping the clutch just enough to allow the beam to be lowered very slowly onto the travel lock. At the instant of contact depress the clutch and shift truck to neutral.

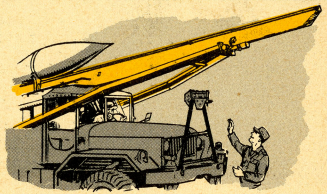
3

Let the clutch out s-l-o-w with the motor at a low RPM when starting to elevate or depress the launching beam. Gradually increase the RPM as desired, but don't exceed 2000.



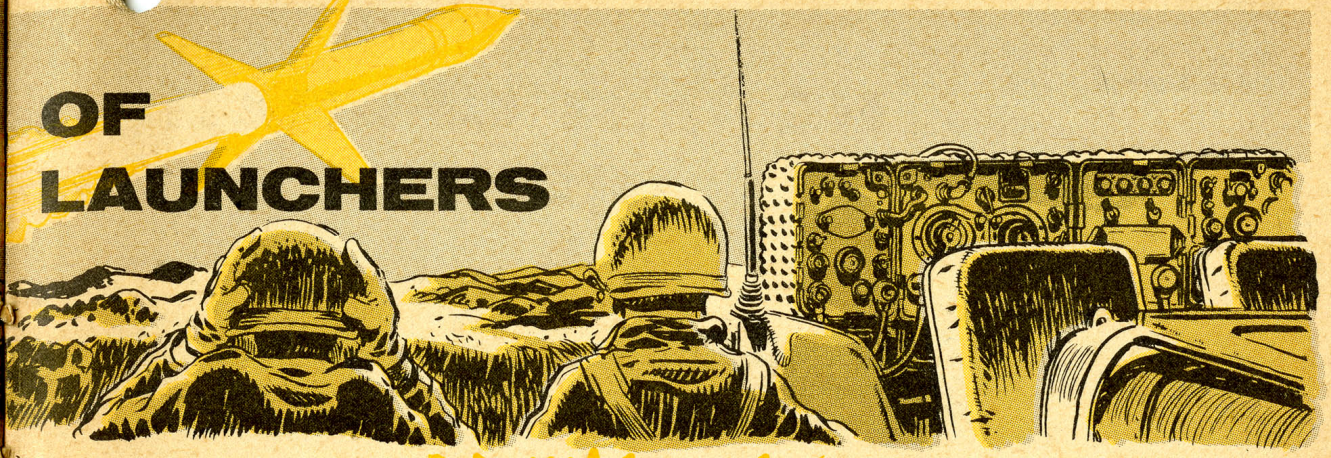
4

Depress the power-take-off safety lever by hand when the ignition-interlock-circuit is out of order **only in an emergency and with extreme care.** When this emergency method is used, station a man outside the truck cab to instruct the operator when elevating or depressing.



Saves a lot of trouble to have the ignition-interlock-system inspected at the first sign of electrical foul-up.

OF LAUNCHERS



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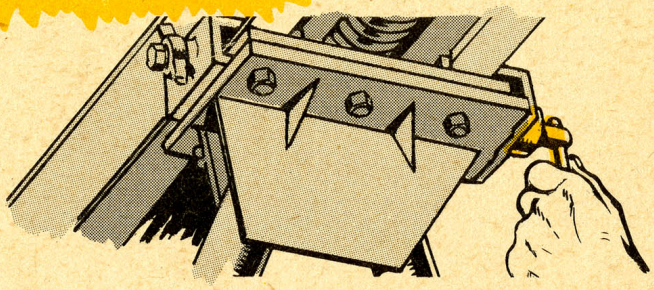

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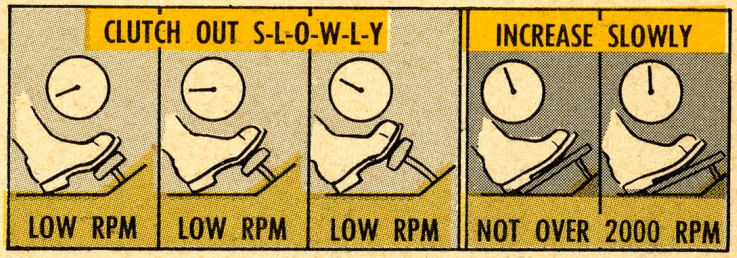

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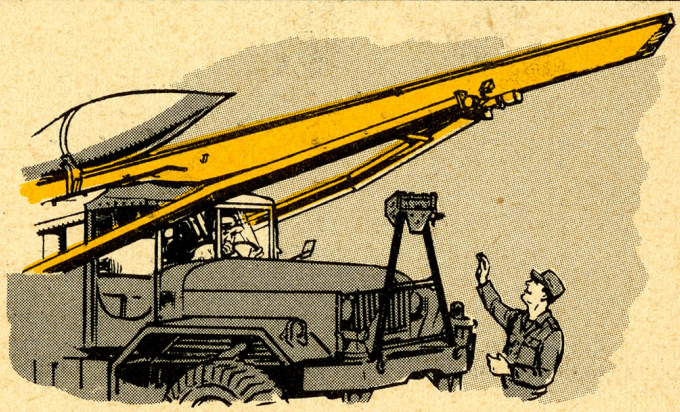

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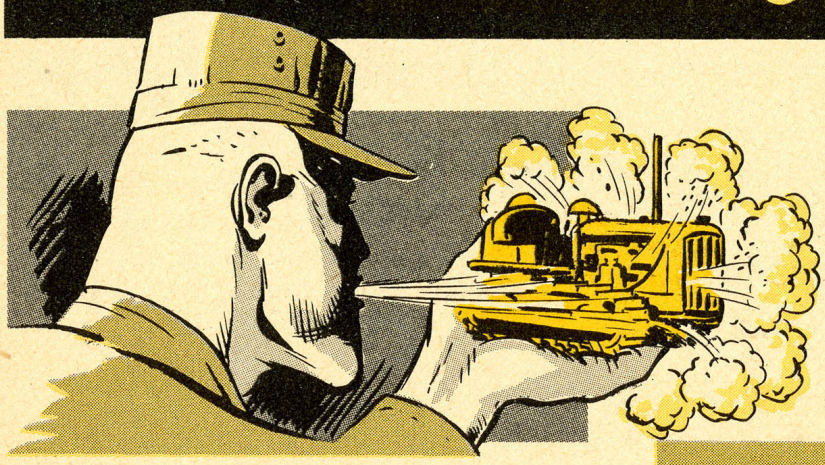
ENGINEERS

SGT. DOZER'S DIRT-STIFF CLINIC

13 Unlucky Goofs



The things guys in the test labs do to keep dirt out of an engine. Fantastic, amazing, and everything else.

F'rinstance, take the fuel filter that traps hunks of dirt only 39 millionths of an inch big. That would make a gnat's whisker look like a railroad tie.

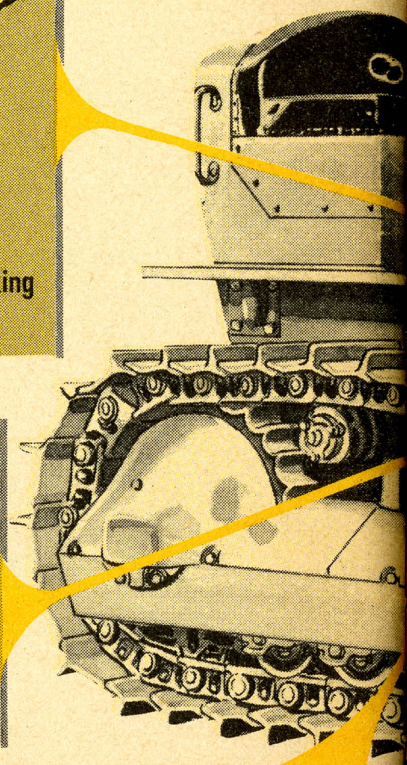
The test-tube boys work hard on it because dirt fouls up an engine—like sand in your lube. It wears, grinds down and beats up the parts.

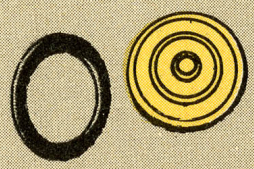
If they didn't have filters and strainers and such stuff, most engines would wear out fast compared to how long they generally last. To keep an engine running right for a long time, those dirt-catching parts have to be used right . . . and kept in good shape.

Here are some other openings in an engine that can take in dirt. Keep your eye on these 13 unlucky spots. A little care and cleaning will keep dirt on the outside.

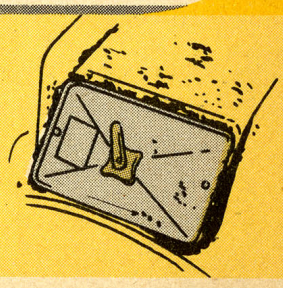
Breather assembled wrong, or dirty.

Getting dipstick dirty when checking oil level.





Filler cap gasket worn or missing; cap not cleaned before removing.



Bad rear main-bearing caused by dirty clutch compartment, operating in mud or water, or failure to wash the flywheel clutch compartment right.

ENGINEERS
SGT. DOZERS' DIRT-STIFF CLINIC

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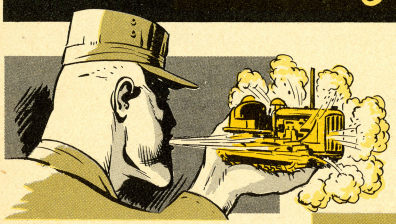

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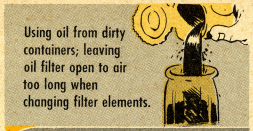
Getting dipstick dirty when checking oil level.

Filler cap gasket worn or missing; cap not cleaned before removing.

Bad rear main-bearing caused by dirty clutch compartment, operating in mud or water, or failure to wash the flywheel clutch compartment right.

Leaving exhaust uncovered when engine is stopped.

Air cleaner not serviced according to TM.

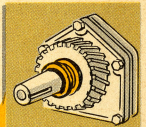


Using oil from dirty containers; leaving oil filter open to air too long when changing filter elements.

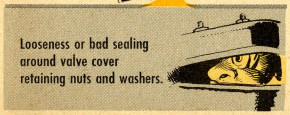
Checking valve settings without first cleaning the valve cover, or checking with a lot of dust around.

Loose intake manifold, air transfer pipe, or defective gaskets.

Loose inspection covers, or defective gaskets.



Oil and dirt seal on front end of crankshaft worn.



Looseness or bad sealing around valve cover retaining nuts and washers.

Drain plugs not cleaned before replacing.

Leaving exhaust uncovered when engine is stopped.
Using oil from dirty containers; leaving oil filter open to air too long when changing filter elements.
Loose intake manifold, air transfer pipe, or defective gaskets.
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TM
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Oil and dirt seal on front end of crankshaft worn.
Looseness or bad sealing around valve cover retaining nuts and washers.
Drain plugs not cleaned before replacing.

LONG TAPER WORKS BETTER

Drag out an issue slip, write a few lines, and you'll have a lot easier time adjusting the hydraulic-system valves in the Nike pit.

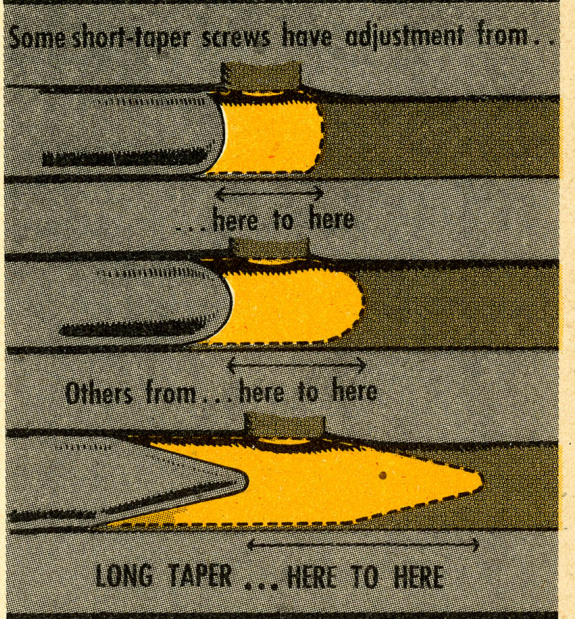
The idea is to requisition long-taper adjusting screws (FSN 5305-508-0964) to replace the short screws on the solenoid valves.

You know how it is with the short adjusting screws. A guy's almost gotta have a safe-cracker's touch to use 'em. A quarter to a half turn makes a big difference in the oil flow.

Long adjustment screws are different. A couple or three turns of them changes the oil flow only a little. That makes fine adjustment easier.

So fill out that requisition pronto and send it to the Engineers. When you get the long screws, put them all the way in the valve. When they're bottomed, screw 'em out the number of turns it shows here to start. Check elevator operation and then make the final adjustment.

HERE'S AN EXAMPLE OF THE ADJUSTMENT RANGE OF DIFFERENT TAPER LENGTHS.



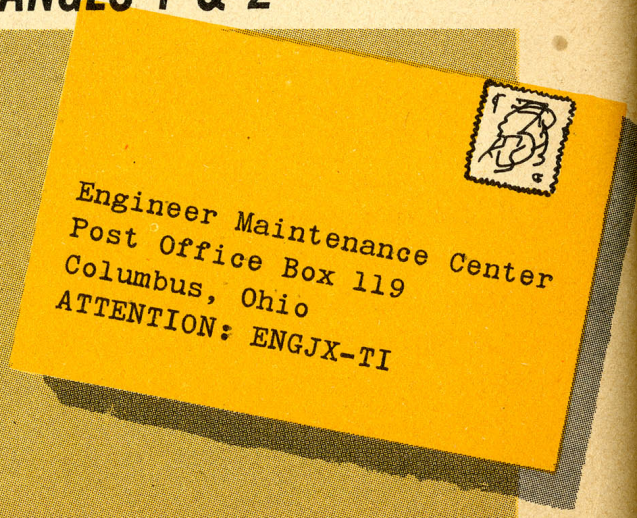
VALVE	TURNS FROM BOTTOM
SA1	10
SA2	5
S3	3¾
S4	7½
S5	2½
S6	6¼
SB	2½

PARTS LISTS: CHANGES 1 & 2

Here're two changes on writing in for parts support lists when there's no ENG 7 & 8 on equipment. (Reference PS 54, page 44.)

1. Ask field maintenance if they have lists. If so, get 'em *there*.

2. If you do have to write, note the new code letters in this address:



Power Control Unit Adjustment

HARD BOLTS MAKE THE DIFFERENCE

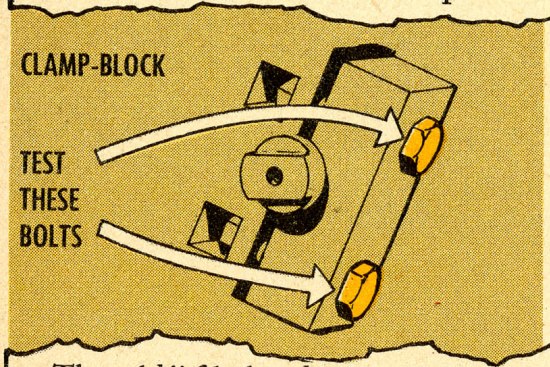
Dear Sgt Dozer,

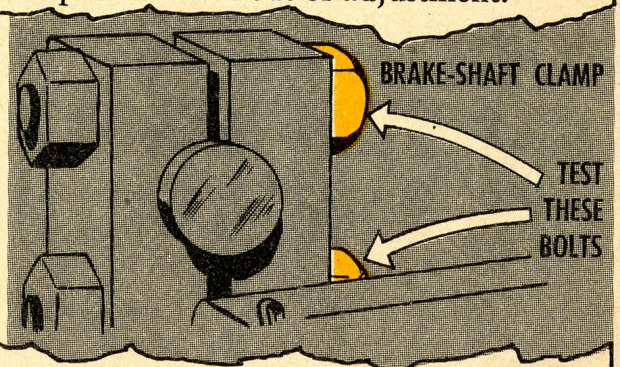
Our LeTourneau Model R678 power control unit keeps getting out of adjustment. We adjust it right and tighten it up, but after a while it's out of whack again. Got any ideas?

Sgt F. W.

Dear Sgt F. W.

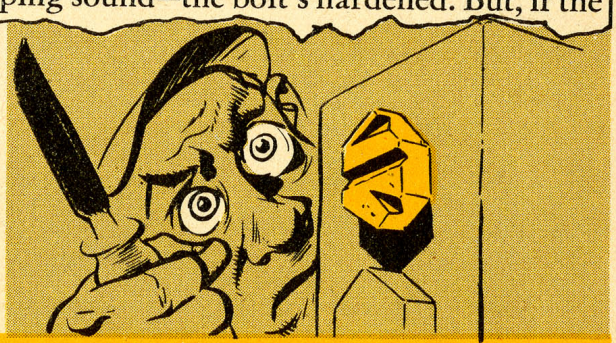
Better give a look at the bolts on the drum-shaft clamp-block and the brake-shaft clamp. Those bolts are supposed to be special heat-treated ones. Soft bolts will stretch or the threads will strip . . . which puts the unit out of adjustment.





The old "file hard" test will let you know whether your bolts are hard or soft. Run a file over the heads of the bolts with a light touch. If the file doesn't make a dent and your teeth rattle from the scraping sound—the bolt's hardened. But, if the

HARD—OK



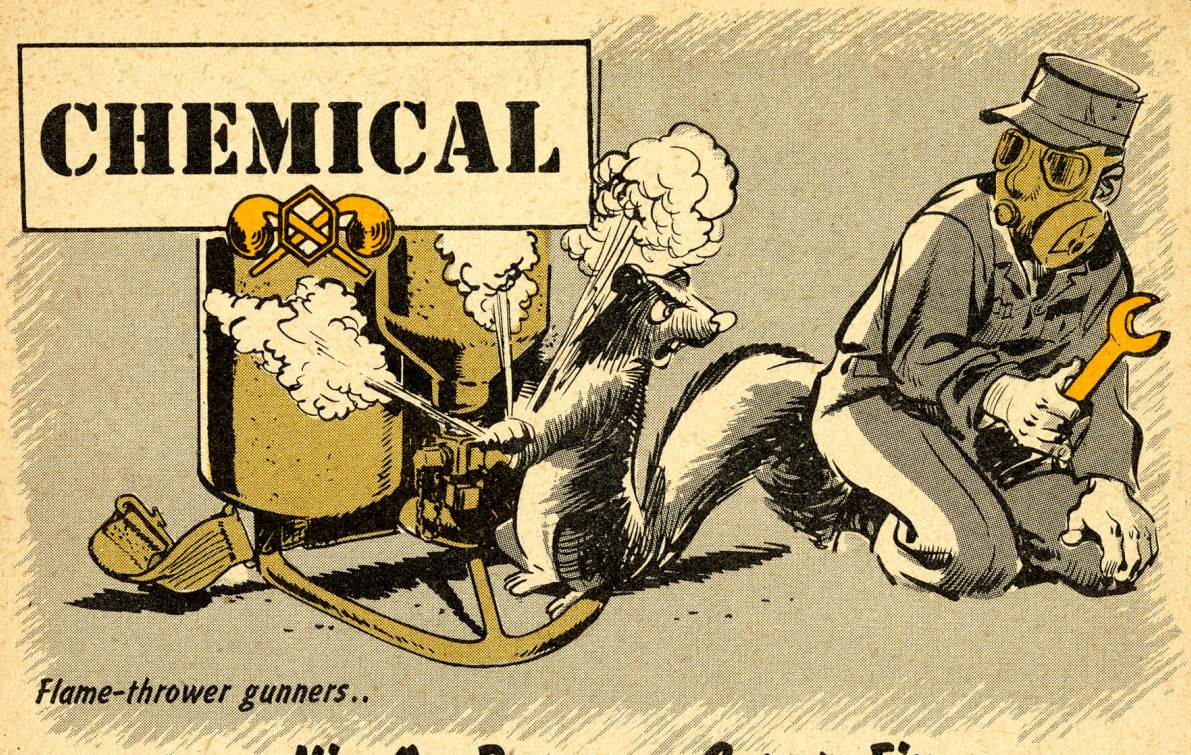
SOFT—NO GOOD!

file cuts a groove, replace the bolt or bolts with hardened ones. Use LeTourneau bolt and nut Part No. 170-C1687 for the drum-shaft clamp-block and 170-C1619 for the brake-shaft clamp.

Better give those bolts the hardness test—even if your power control unit's not out of adjustment. If the bolts are soft, you'll be preventing future trouble by changing them now.

Follow your TM or manufacturer's manual to make sure your PCU adjustments are right.

Sgt Dozer



Flame-thrower gunners..

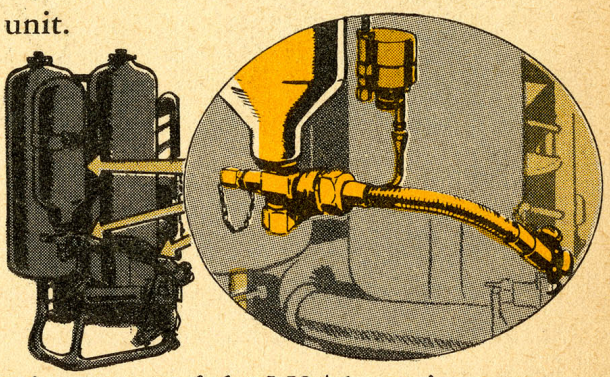
Nix On Pressure Group Fix

Note this well: The pressure group (FSN 1040-160-8032) on the M2A1 portable flame-thrower gets replaced as a unit only.

It's absolutely nix on repairing pressure-groups parts yourself, or replacing pressure-group components piece-meal . . . no matter how minor the leak, damage or difficulty may seem.

It's a rule in your favor because the pressure tank on that man-mounted wild-cat packs an air-pressure charge of up to 2100-PSI.

To handle that kind of power safely you've got to have a pressure group (pressure tank, pressure-tank valve assembly and check-valve assembly) that's been carefully assembled to operate as a unit.



Also, be sure to always apply the wrench mighty carefully when working the pressure-group connections. That's so the threads won't get loused up. And, of course, never touch a wrench to any part when it's under pressure.

For a solid education in operation and maintenance of the M2A1, you've gotta cooperate closely with TM 3-376, "M2A1 Portable Flame Thrower." And once you know all the answers you'll understand why only trained flame-thrower maintenance personnel should fill, charge or service the M2A1.

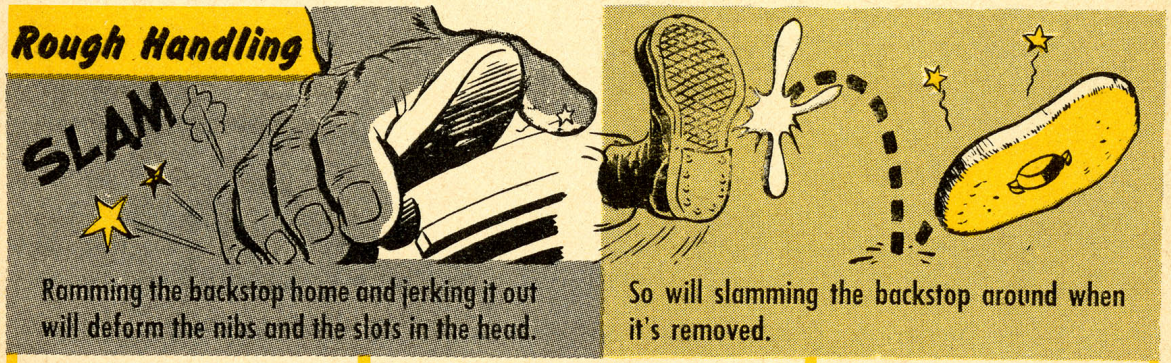
FLASH TO: **M3A2 SMOKER OPERATORS**

SUBJECT: **DEFORMED NIBS**

Watch those tiny nib-like fingers on the engine-valve backstop. Those polished points mustn't lose their shape.

As you know, those nibs are made to slip smoothly into their mating slots in the engine head and in the engine-valve... that's what keeps the engine-valve locked in place. It's a special feature of the M3A2.

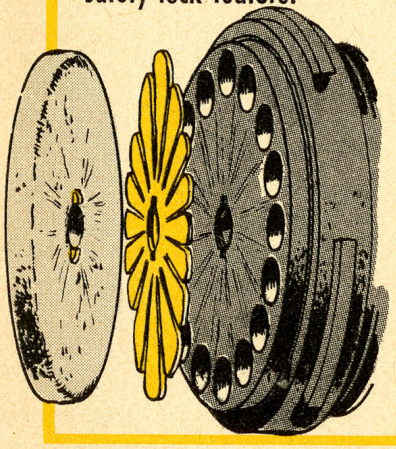
Rough Handling



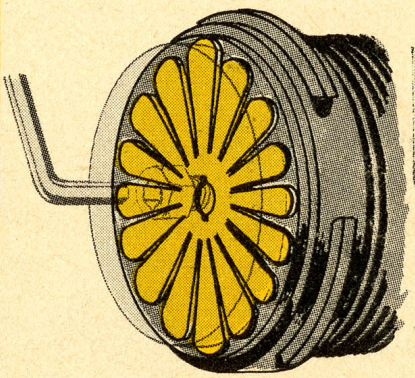
Ramming the backstop home and jerking it out will deform the nibs and the slots in the head.

So will slamming the backstop around when it's removed.

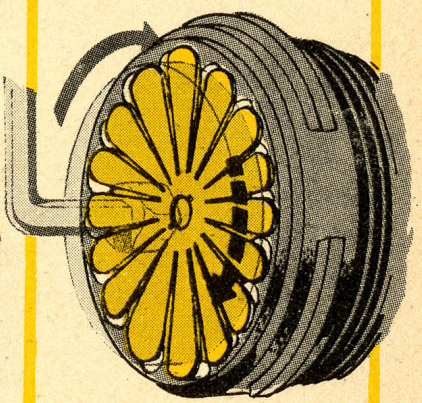
With the nibs burred, or damaged, the M3A2 loses its engine-valve safety-lock feature.



Then, as the valve is tightened in place, there's danger it will turn with the backstop.



That means the valve petals will slip off base.



Results: Poor operation (if you get going at all), back pressure leaks, backfiring and danger of fire, plus damage to the engine-valve and the head.

Should your backstop nibs get damaged, don't try to straighten them yourself. Take the head assembly to the company mechanic and let him reshape the nibs to a true fit.

Safe-guarding the backstop's nibs will help your M3A2 deliver top-notch pulse-jet engine action. So make a handy note some place.
No rough stuff with the backstop... it's a delicate thing.

Connie

Boots... Bo

Boots and blisters always have been buddies under the leather.

And it's one friendship that's gotta go!

The one-two punch, of course, is saddle soap and elbow grease.

This pair goes to work on dryness, dampness and dirt to keep your boondockers on good terms with arches, toes, ankles, old blisters and varicose veins.

Here's how it works.

Saddle soap is a mixture of waxes, soap and oils in "aqueous emulsion." Relax! That just means they're mixed with water. Which also means the water pries open the pores on the leather to let in the wax, oil and soap.

Once inside, the saddle soap cleans, preserves and puts the stopper on mold.

Since soap is for the hands, use your mitts to work that saddle soap into the boots. Really rub it in good to help replace some of the oils lost during wear. Get the leather smooth and workable. Then let it dry.

And this is one drying job that the sun and other quick-heat agents are no good for. Let the boots dry in a cool, dry, shady spot.

QUARTERMASTER

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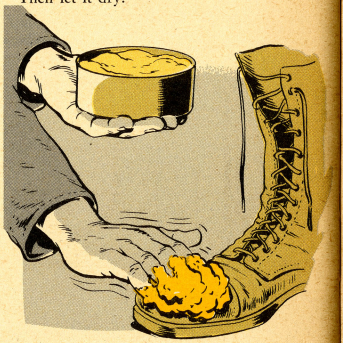
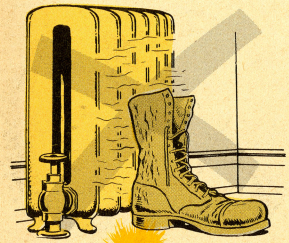


And this is one drying job that the sun and other quick-heat agents are no good for. Let the boots dry in a cool, dry, shady spot.

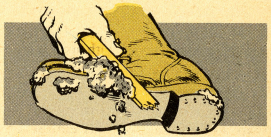
Keep' em away from radiators, heating units, blowers, hot-air artists and windows that are exposed to the sun.



Then you're ready to hit your polishing routine—brush, soft cloth and plenty of muscle. Watch 'em shine.

And while you're elbow-bent for leather, slip this hint into a boot toe for once-in-a-while reference:

When scraping off mud, dirt, grease and gunk in general, use only a smooth piece of wood. Nix, never use a knife or any kind of metal. It could easily knick or scratch the leather.



Keeping boot leather soft and workable means miles of clompin' in comfort. And who wants to march with blisters, sore feet and achin' arches?

When your supply sergeant politely asks, "Whatyawant?" throw this at him:

Soap, saddle, paste, Fed-P-S-609
1 lb can FSN 7930-170-5467

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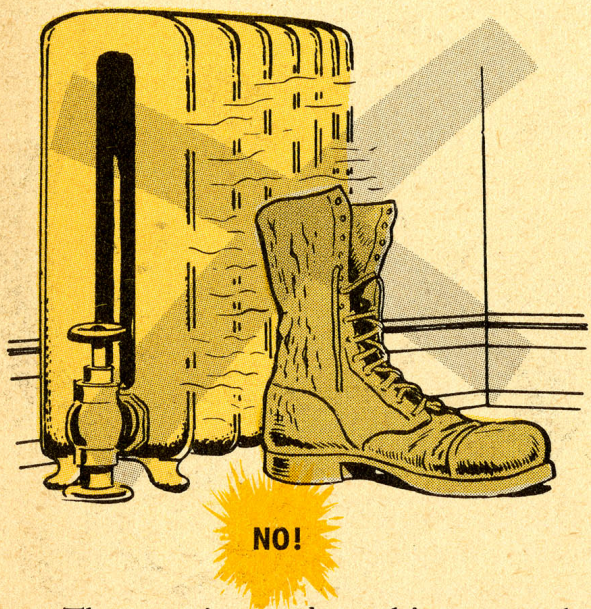

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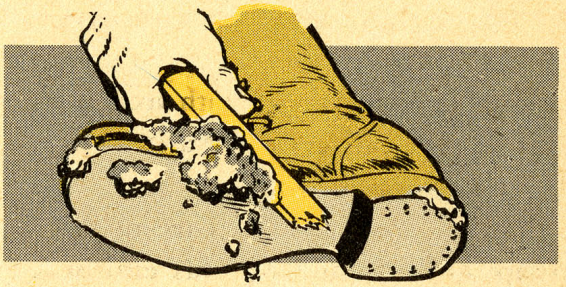

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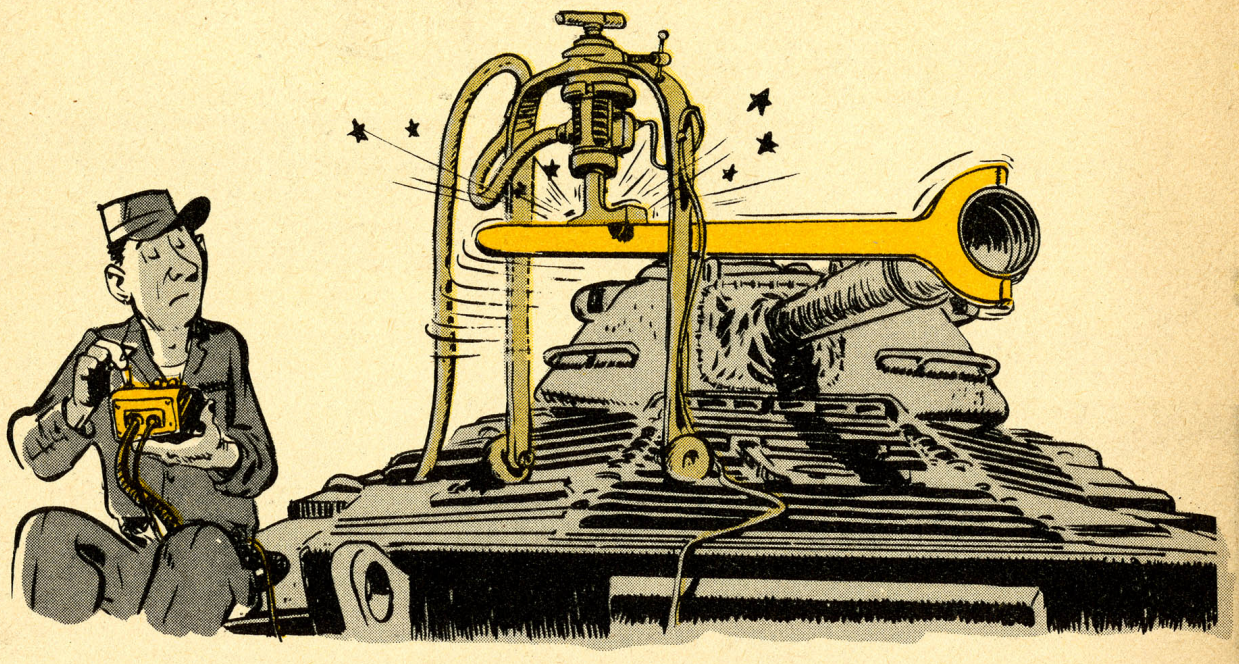
CONTRIBUTIONS

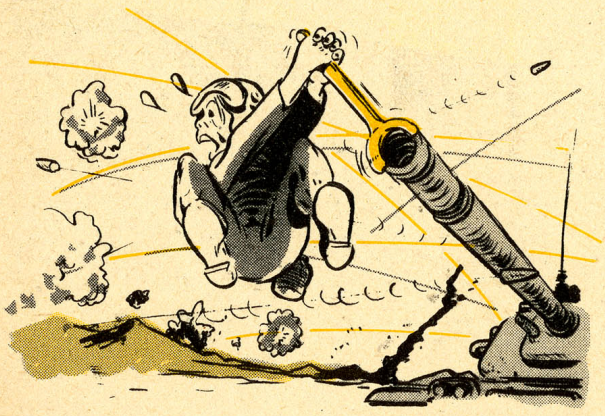


BORE EVACUATOR WRENCHES

Dear Editor,

Any tanker will tell you that removing bore evacuators from tank gun tubes can be a rough job.

The tube is usually carried in the travel lock when the tank is put through its paces. The heat from the engine gets to the tube and next thing you know the graphite grease on the tube threads melts. Later . . . the tube cools, condensation forms and before you know it rust and corrosion take over.

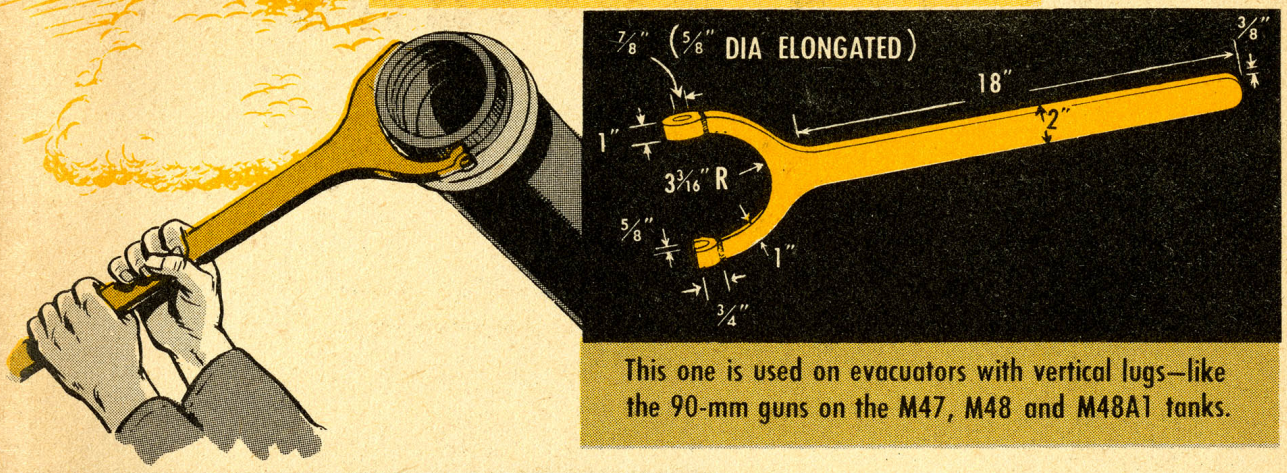


You're supposed to clean the evacuator every 50 rounds or once a week, whichever comes first. Under normal conditions, you don't run into too much trouble. But when someone is shooting at you, and you're firing back, you can't set up a schedule like that. And when you do get a chance to work on the evacuator, you've got a problem, even with a hammer and wooden block for some added persuasion.

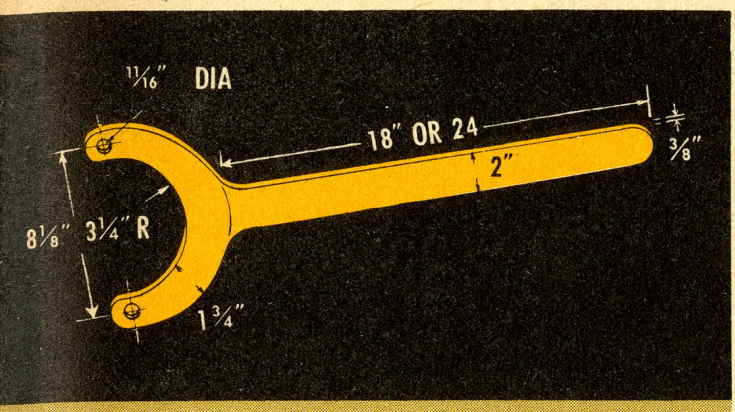
So you need some special wrenches–wrenches that'll break the evacuato loose like no hammer and block wil

Well . . . here're the wrenches and didn't take much doing to have 'e made.

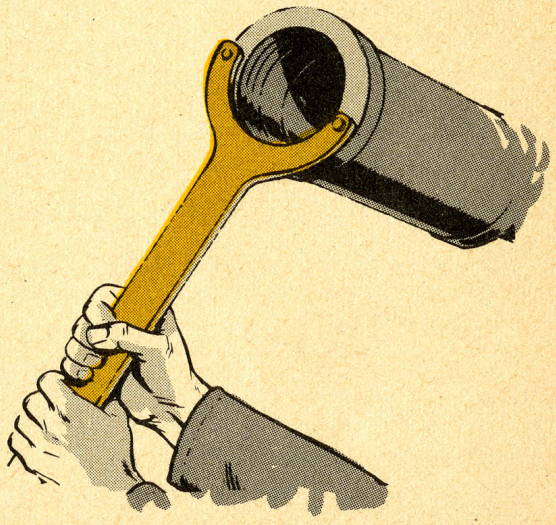
SPECIAL PERSUADERS

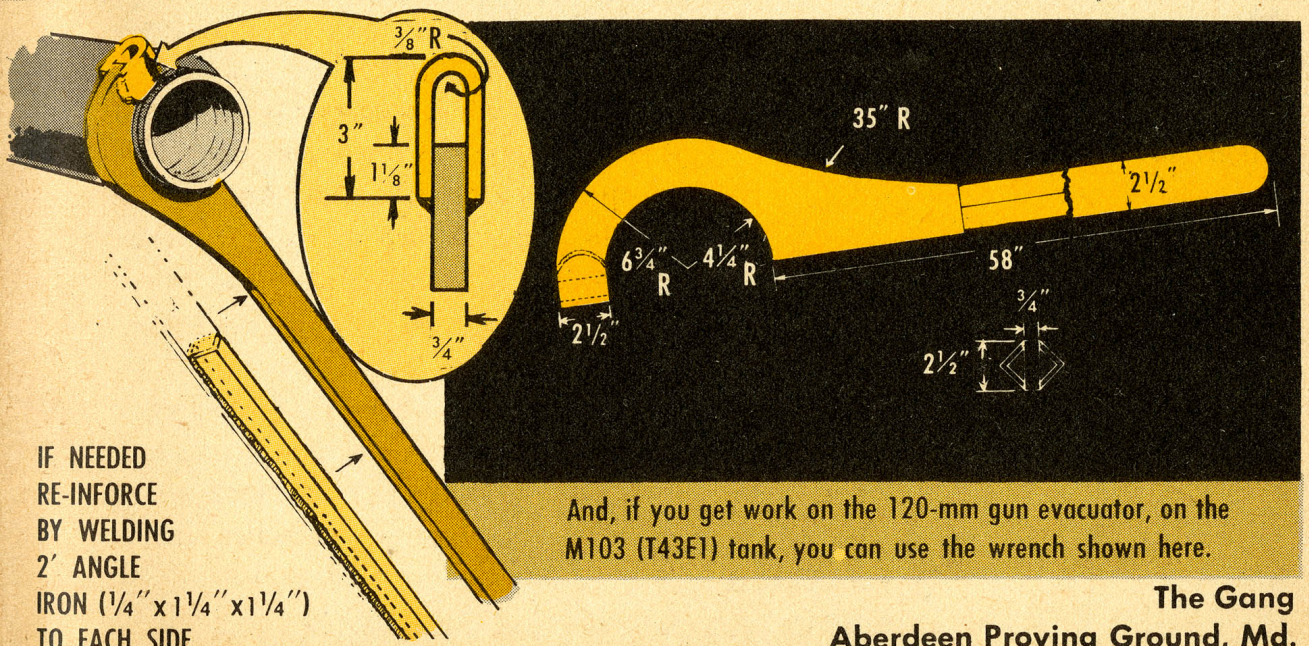


This one is used on evacuators with vertical lugs—like the 90-mm guns on the M47, M48 and M48A1 tanks.



This shows you the wrench used on the 76-mm gun on the M41A1 tank—to remove the evacuator with horizontal lugs.





IF NEEDED RE-INFORCE BY WELDING 2' ANGLE IRON (1/4" x 1 1/4" x 1 1/4") TO EACH SIDE

And, if you get work on the 120-mm gun evacuator, on the M103 (T43E1) tank, you can use the wrench shown here.

The Gang
Aberdeen Proving Ground, Md.

PAINT REMOVER

Dear Editor,

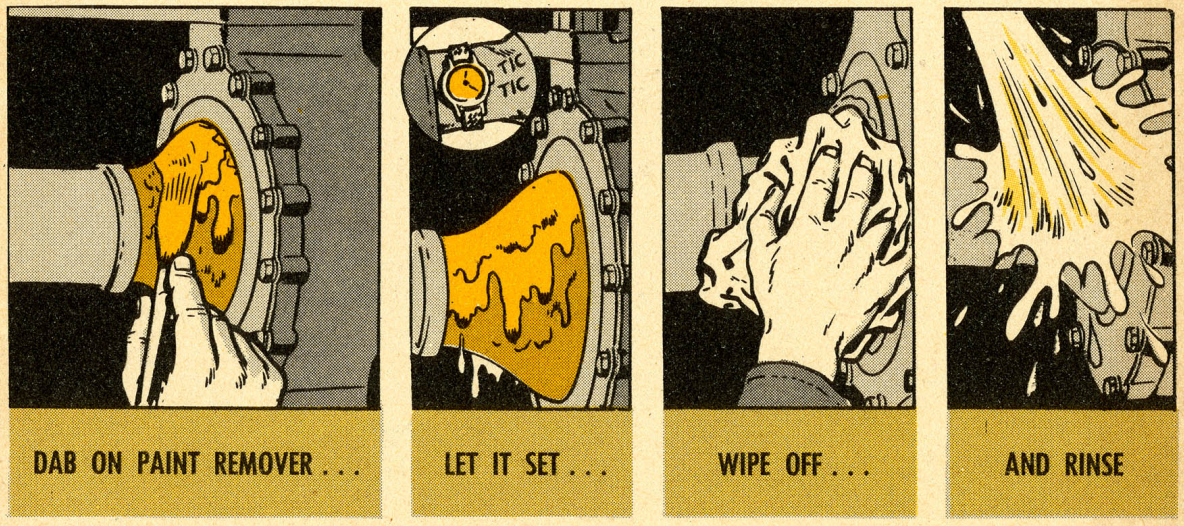
I have a real short-snorter for you, but one that may help some guys who have trouble getting paint off those CV joints.

What we did to remove that dried-up stuff was to take some ordinary brake fluid and pour it on a rag. We then laid the rag on the housing for a short time and found that the paint had softened enough so it could be wiped off easily.

We did get a couple of stubborn spots but found that after the brake fluid sinks in for a while, some steel wool would take the paint right off.

Pvt Bruce Kruger
Camp Irwin, Calif.

(Ed Note—It'll work OK, but brake fluid's sort of expensive to be using as a paint remover. There's something in supply that'll do the job as well if not better than brake fluid—and a lot faster. That's Remover, paint and varnish {alkali-organic-solvent type}. You can get a 5-gallon can by using FSN 8010-



283-0511. All you have to do is put a dab on the dried-up paint with a nylon brush, let it set a few minutes and just wipe it away with a clean rag. Then, rinse the part off with water to get all the chemical off. It's powerful stuff, so if you get splattered with some, wipe it off and wash yourself immediately.)

Connie Rodd's BRIEFS

A strippable act

Hop to the phone and ask the Ordnance man with the spray gun to drop around to your outfit with his equipment and some plastic adhering strippable coating (FSN 8030-264-5837). It's what you want to keep the weather from the above-ground cables in your M33 FCS.

What's in a name?

Any time you missilemen mention your weapon in reports and the like you wanna call it by its full name. F'rinstance ... make it Nike (Ajax)—the new handle for Nike 1... and Nike (Hercules)—the new name for Nike B. Never call it just plain "Nike" because it's kinda tough to pinpoint what you're after.

Rust buster

When it's time to pull that power plant on your M48 series tanks no matter how you sweat and strain, if the engine mounts are rusted up you're licked before you start. To make sure she'll lift out nice and easy, increase the grease on those engine mounting jaws, pins, and screws next D service. Lay the lube on heavy so any water in the hull won't [illegible]t them tight.

Take more time

Don't mix your **C**'s and **D**'s next time you're checking out the engine of your G741 ¾-ton truck. Save yourself some work—test compression every 6,000 miles instead of every 1,000.

Hob-knobbing

Take it easy when you remove or replace the T149E1 panoramic telescope in its stowage box on some of the latest self-propelled vehicles. Otherwise ... you might batter the azimuth, elevation or counter reset knobs. If one is banged up when you're issued the telescope, shoot in a UER.

Need a number?

On your M48A2 tank the decking arrangement doesn't make for easy access to the transmission name plate. But when y'need the serial number of the buggy's slush-box, it can be found elsewhere. Just remove the left rear hull inspection plate (the one y'use for brake and band adjustment) and there's the number stamped on the rear housing—right beside the reverse band adjusting screw.

HEY, JOE! WANNA SEE SOME PEECTURES?
DIRTY RADIATOR
LOOSE FAN BELT
LEAKY HOSE
BAD THERMOSTAT
Stop These Engine Killers